

# STRING FIGURES FROM HAWAII

INCLUDING SOME FROM NEW HEBRIDES AND GILBERT ISLANDS

BY

LYLE A. DICKEY

BERNICE P. BISHOP MUSEUM

BULLETIN 54

HONOLULU, HAWAII

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# String Figures From Hawaii

By LYLE A. DICKEY

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## INTRODUCTION

In 1888 Joseph S. Emerson, government surveyor in Kona, Hawaii, gathered 34 string figures which he pinned to paper he chanced to have with him, writing down names of figures and accompanying chants when he could get them. Six of these have been published by Martha Warren Beckwith (5)<sup>1</sup>. In 1899 Stewart Culin published plates of 18 Hawaiian figures (18, pp. 373-5). These pioneers did not learn to make the figures.

Most of the string figures here described were gathered in 1915-17 on the islands Oahu, Kauai and Niihau. They are the first descriptions published of the methods of making Hawaiian figures and include all but two of Emerson's and all but three of Culin's. Hawaiians have changed residence so much of late years that on the three islands named I have seen natives of every island but Lanai and this collection is fairly complete of Hawaiian figures now existing.

Though anciently Hawaii was perhaps the most isolated of lands, for more than a century it has been the crossroads of the Pacific. Hawaiians have gone as sailors to every land touched by sailing vessels; laborers have been imported from Europe, China, Japan, and the South Pacific. It might therefore be expected that the string figures of Hawaii are mainly those already published. The opposite is true—immigration seems not to have brought string figures. Gilbert Island and New Hebrides laborers were imported into Hawaii in 1878. The nine New Hebrides and two Gilbert Island string figures described illustrate the small influence of late immigration on Hawaiian string figures for, though simple figures consisting of two, three, or four diamonds in a row, are among the easiest to make and are the most popular figures with Hawaiian school children, yet neither New Hebrides nor Gilbert Island methods are found in the schools. One of the New Hebrides figures (fig. 106) is an attractive two-diamond figure as easy to make as the Hawaiian. In the house of the old man who taught me was a small grandson, who picked up a string and made the Hawaiian two-diamond figure (method no. 2, p. 21). Not only have the New Hebrides laborers not influenced Hawaiian figures but they have not passed their own string figures down to their descendants—who make Hawaiian figures learned at school. Distribution of New Hebrides string figures is shown in Table 1.

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<sup>1</sup> Numbers in parentheses refer to Literature Cited, page 169.



TABLE 1. DISTRIBUTION OF NEW HEBRIDES STRING FIGURES.

New Hebrides	Torres Strait	Aus- tralia	New Cale- donia	Society Islands	Fiji	Caro- line Islands	Eskimos	Navajo Indians	British Guiana	
kombe, fishnet							burbot	two stars		2
dancing sunbeams	little fishes		porker, stage in						mountain	3
killikia leaves		crayfish	sugar- cane, stage in	tuare, stage in	matani- singa, sun					4
two birds flying	tern	palm tree			owl	shredding coconut				4
	2	2	2	1	2	1	1	1	1	13

Of 115 Hawaiian figures (not including slip tricks) I find only 18 of the same method among the foreign ones that I have examined—720 reported from Europe, Asia, Africa, North America, South America, and the South Pacific. Of 16 slip tricks found in Hawaii, 6 are reported from other places. Table 2 shows the distribution of the few Hawaiian figures and slip tricks found in other places. All slip tricks are much the same in idea and in basic methods. Doubtless more Hawaiian ones would have been reported as made elsewhere had investigators considered them worth while. Their stronger appeal to sailors probably accounts for slip tricks being more widely distributed.

TABLE 2. DISTRIBUTION OF HAWAIIAN STRING FIGURES.

	POLYNESIA					MELANESIA, PAPUA, AND AUSTRALIA					AFRICA	NORTH AMERICA	EUROPE	ASIA	
	New Zealand	Marquesas Islands	Tonga	Gilbert Ellice	Fiji	New Caledonia	Papua	Torres Strait	Australia	MICRONESIA					
Hawaii										Caro- lines					
papio-ma- kanui method no. 2												Osage Indians (?), two diamonds	Scot- land (?)		2
lighthouse			drinking glass		canoe	unnamed			pouch		bat				5
papio-ma- katili A method no. 2												Osage In- dians (?), diamonds	Scot- land (?)		3
Leha	hapuku														1
Halekumu- kaaha	te whare toto kau														1
piko	wahine														1
moo-iki B	Mouti	moo	tailless lizard		whale's teeth										4
kanaka atualu		anata- faia													1
waa (canoe)		apoo mahai ahaana			Fijian canoe	tim, a well		canoe							4
okoleamo C	toemi	popo tikane													2
pae mahu B		puaa vaevae vau								ghosts					2

TABLE 2. DISTRIBUTION OF HAWAIIAN STRING FIGURES—CONTINUED.

Hawaii	New Zealand	Marquesas	Society Islands	Tonga	Gilbert Ellice	Fiji	New Caledonia	Papua	Torres Strait	Australia	Caro lines	Africa	North America	Europe	Asia	
M					unnamed								Eskimos & pot boiling			1
leho																1
pahiolo A			Taato Ino									Yoruba, Gold Coast, skin bellows				2
saw B														saw	India and Malaysia	2
saw C	sawing wood		saw												Chinese	3
saw D														Ireland saw		1
Himaloa	whale	ha-hau									plan of house					4
hand slip trick A										canoe			Eskimos			1
hand slip trick B	unnamed	trick figure						sago palm					Eskimos	German and others		5
hand slip trick C	Maori mouse trick													Europe		2
kele-opa							up-rooting manianta		mouse			west and central Africa	American Indians	cat chasing mouse	Japan	6
e loll e		koe (eel)						mosquito	lizard		carrying money	west and central Africa				5
toe slip trick								toe trick			trick		Navajo and Chipewa			3
24	9	6	4	2	1	3	3	3	3	2	4	5	7	7	3	62

The few Hawaiian figures found in other places show, first, affinity with other Polynesian figures, then, affinity with those of other Pacific islands. Omitting slip tricks and ordinary cat's cradle, of 346 figures from America (obtained from the Arctic country to Venezuela) only 4 are in Hawaii; of 15 reported from Europe and Asia, 2 are in Hawaii; of 85 from Africa, 4 are in Hawaii; of 405 from the South Pacific, 27 are in Hawaii; of the 105 from Polynesia, 16 are in Hawaii; and of the 297 from the other South Pacific islands, 11 are in Hawaii. This accounting includes only figures identical in form and method. There are many interesting examples of a figure made by different methods.

Methods of making relate the Hawaiian figures definitely to those of the South Pacific and America as against those of Africa, Europe, and Asia. The most natural grouping of string figures according to method is perhaps into (1) those whose opening movements include fingers of both hands and which are made by both hands working at the same time, more or less similarly, and (2) those, which are more or less mechanical, made by one hand upon the other, and begun with bizarre openings, such as with string on one hand, or over wrist or thigh. The figures of Europe, India, and Africa belong to group 2. The only figure common to Europe and Hawaii and not found in other countries is "tallow dips," a figure made on one hand by the other. The India figures are made with three strings looped over the left shoulder and under the right arm, the figures being made on the left hand with the right (9, p. 92). Africa has a most singular set of openings and few in which the hands are used together. Hawaii has only five figures made on one hand with the other acting merely as mechanic.

A. C. Haddon, Nestor of string figure investigators, wrote (18, p. xii) :

On making a general survey of string figures . . . it seems that they fall into two main groups . . . In the European and Asiatic type two strings pass around the back of each hand, and the crossing loops are taken up by the middle fingers. In the Oceanic and American type there are no strings at the back of the hand, and the crossing loops are taken up by the indices. The former invariably requires two players, while one person suffices for the usual figures of the latter type. I propose to designate these two types as the Asiatic and the Oceanic respectively.

This division into Asiatic and Oceanic types is still occasionally referred to but is outgrown. Professor Haddon includes only the familiar cat's cradle in the Asiatic type. To divide the more than seven hundred string figures of the world into two groups, one of which consists of but a single figure, is a poor classification; it is also incorrect and omits numerous figures which fall into neither group. Though it is true geographically that Europe and Asia fall into a division having almost no string figures as compared with the rest of the world and that the ordinary cat's cradle is the most common figure in those places, and the only one thus far reported from China,

yet to begin cat's cradle on the backs of the hands is European but not Asiatic. In China and Japan, cat's cradle is begun on the backs of the wrists, and moreover this is true only at the beginning of the first figure and not of succeeding figures of the series. The string at the backs of the wrists is more common in Oceanic countries than in China and Japan, notably so in Micronesia, though not at the opening of a figure. Also, the "Asiatic" form does not invariably require two persons. (See "cat's cradle solitaire," page 137.) In Europe and Japan the "Asiatic" opening is in the minority and does not deserve to monopolize the term "Asiatic." In Japan one figure at least begins with opening A, and cat's cradle is sometimes begun with the "candles" figure with an opening in which the loop is hung from thumb and index of the left hand. In Europe the figures known in Scotland as "leashing of Lochiel's dogs" and "tallow dips" do not begin with the "Asiatic" opening. In India the "Asiatic" opening may exist, but it has not been reported and other types have.

In Oceania the "Oceanic" type is the most common, as it is among the Eskimos and North American Indians, but several other types are numerous and no one deserves to monopolize the term "Oceanic."

The string figures of Hawaii, though closely related to those of the South Pacific, differ from them definitely in several ways. In Hawaii the mouth is not used as an extra finger or hand, as it is in many places in the South Pacific, but is used only to assist a stiff or clumsy finger, mainly in navahoing. The various openings in which a small loop is made in the string at the start are not found in Hawaiian figures. (See the Gilbert Islands figure "four eyes," p. 167; the New Hebrides figures "yam," p. 161; and "bow and arrow," p. 162.) Movements which elsewhere are so common as to be given a name are lacking in Hawaii. Theoretically the simple two- and four-diamond figures of Hawaii and of the countries of the South Pacific, whose figures are in closest affinity with Hawaii, would be made alike. Oddly enough this is not true. The single simple figure of this kind which is found elsewhere is not found in the South Pacific but in Central, South, and West Africa, and in Great Britain, and was made by an Osage Indian in Hampton, Virginia. The Osage Indian made no figures not found also in Ireland and Scotland and quite possibly knew no figure not learned from whites. Ball has reported that at least one of these diamond figures in England had been learned from a sailor (3, p. 26); therefore a Hawaiian origin for this figure is not impossible. As Africa has no other similar diamond figures, that this figure is common is probably coincidence. The five-sided figure of a house which appears in 18 Hawaiian figures is rare elsewhere, being found in a few figures in Siberia and in two in New Zealand. Hawaii begins 47 figures with Opening A, and 11 with a variation of Opening A. Yet one of the most characteristic endings for Hawaiian figures both with Opening

A and the opening used in "two eyes" (method no. 1, p. 21)—navaho thumbs, put indexes into triangles near thumbs, and turn fingers away under the figure and up—which occurs 21 times in Hawaiian figures, is reported elsewhere only in the figure cited as made in Africa, in Great Britain, and by the Osage Indian.

Hawaiians have three words for string figures: *hei*, *pu*, and *pukaula*. The term *hei* applies to any string figure; *pu* and *pukaula* apply to slip tricks. Slip tricks were much used for betting in ancient times (7, vol. 6, p. 215; 23, p. 297). Some tricks required a string 18 feet long (23, p. 298, note 3); such elaborate slip tricks are not made now. Hawaiians have no names for any of the movements of string figures and no legend or theory to account for the origin. I have been told that a figure might be used for a secret signal, to the initiated mean, for example, "Let's go fishing"—but my informant could make no figure.

References to string figures are few. A Hawaiian woman, who could, however, make no figures, told me that her grandmother of Huleia, Kauai, in relating the story of Kamapuaa, the pig demigod, would say that his father, ashamed to be known as father of a pig, threatened to kill his daughters for fear they would gossip, and that they in terror entreated their gods for protection, as they prayed, working string figures. Beckwith (5, p. 5) was told that playing cat's cradle at night brings bad luck. I know of no reference to string figures in any published stories or chants except a line in a chant in the Fornander collection translated there (7, vol. 4, pt. 3, pp. 440-1):

Kanaloa is on the platform,  
Playing at cat's cradle with the dead.

I believe, however, that this is an error in the translation and that the chant does not refer to cat's cradle. The word *heana* translated "dead" also applies to the extreme rear of a canoe where valuables are kept, and I suggest as a translation:

Long Kana on the platform,  
Tied up, stretching clear to the bow.

The chant is an invocation to the magic canoe that was to carry Kana and his brother on a warlike expedition and pictures the future. No dead body was on board, but Kana travelled laid out on the platform as a bundle, extending the entire length of the canoe (op. cit., p. 444).

The subjects of the string figures are those that entered into daily life and talk: love affairs, animal life, turtles, shrimps, fish, crabs, geography, mountains, springs, places, potatoes, stars, bridges, houses, fishnets, calabash nets, eyes, navels, and breasts, people in well known stories and legends.



So many Hawaiian figures are accompanied by chants as to suggest that at one time they all were so accompanied. These chants have the characteristics of Hawaiian poetry and are highly figurative, the figure perhaps arising from a play on words, the form of the object, its nature, or its associations. There is no objection to mixed metaphors. Geographical references jump from place to place so fast sometimes as to make the head swim, each place having some association aside from its location that in ancient poetry made it a conventional figure of speech. This symbolism makes an ancient Hawaiian chant difficult to interpret, even though it be a short string figure chant. The occasions of making the chants are long past and to the present generation of Hawaiians most of the allusions that gave a meaning and charm to the figures of poetry are unknown. My translations are perhaps full of error. All doubtful translations, however, have been submitted to Hawaiians for criticism and each is at least plausible to some native Hawaiian. Many allusions are not interpreted. It would take a lifetime to run every figure of speech to its lair. The allusions are largely to legend and myth, to well known stories and chants. Some of them are short extracts, many of them changed, from long, famous chants. Strange to say, Hawaiians able to recite these long chants as a rule can make no string figures. These string figure chants, perhaps, were the literature of the common folk who from lack of memory could not enjoy the highest form of literature. Many Hawaiians have said to me that their grandparents would sit by the hour repeating these little chants as they made the figures. The underlying ideas of many of the chants are erotic. The references to mythology are not reverent, being made only for amusement. Except for *Hana ka Uluna* (p. 143) I have no figure that suggests use in connection with any serious purpose.

The Hawaiian is fond of motion or change in a string figure. There are 32 figures with a sequence of figures, the first stage usually being the most complex, the figure becoming simpler with each succeeding stage; and some of them relating a story. There are 29 without sequence but which lead up to some final motion.

In quite a number of figures form bears no apparent relation to the name or to its accompanying chant. In these figures some conventionalized imagery seems to be involved. For instance, comparison of a number of figures and chants makes it appear likely that the house, wherever it occurs, typifies happy relations between husband and wife or lover and lass, and that the house with broken gable, typifies unhappy relations or storms. Probably every geographic reference has its allusion. Some Hawaiians go so far as to suggest that every chant and every name of a string figure has a figurative meaning in addition to the obvious one. Doubtless the loss of knowledge of the old allusions, along with the loss of knowledge of the old mythology,

history, and the names of winds, and seas, has had a great deal to do with the decline of the pastime of string figures. Not only does the modern Hawaiian have more to interest him, but he, and particularly his child in school, does not know and understand the allusions that were the main attraction in the string figure. Children no longer learn figures from their parents, for the parents no longer make them even when they know how. In Honolulu I found an aged couple, the husband a native of Kohala, Hawaii, and the wife a native of Niihau, both of whom make string figures, neither knowing, until my inquiry, that the other could do so. Many of the figures that both could make they called by different names, and often used different methods to make the same figure.

I have noted the nativity of persons making any figure rather than the name of my first informant for many figures have been made by more than one person, chants have been given by many, one correcting errors made by another. It is impossible to quote all authorities. The only one I have cited for allusions has been the Fornander memoirs. In interpreting many chants I have relied upon mere suggestions by native Hawaiians who have only their memories to draw upon. Many titles, for instance letters of the alphabet, bear on their face the proof of their late origin. As the real name is lost I use the name given by those who made the figure for me.

I express my thanks to Theodore Kelsey of Hilo, who, with a number of gifted Hawaiian friends, has been of immeasurable help in digging into the meaning of the chants. He has supplied three figures not otherwise available and discovered the account of the use of string in healing the sick. I am indebted to Joseph S. Emerson for the use of his collection of string figures and chants; and to Mitsuki Motoda and Betty Dole for making the diagrams.

#### TERMINOLOGY

Technical terms from anatomy, introduced by Rivers and Haddon (26) are here employed.

The part of the string which lies across the palm of the hand or palmar side of a finger or thumb is "palmar," the part across the back "dorsal." Any string on the thumb side of the hand or digit is "radial"; on the little finger side is "ulnar." Since a string passing round a finger forms a loop, each such loop is composed of a radial string and an ulnar string. Of two strings on the same digit, hand or wrist, that nearer the finger tips is "distal," the other "proximal." Every loop has a "distal side" and a "proximal side."

These six adjectives—palmar and dorsal, radial and ulnar, proximal and distal—together with names of fingers, make it possible to state precisely the relative place of every string in a figure held in the hands. More ordinary terms such as upper, lower, near and far, would vary in meaning as a finger

is bent or hand turned. Though the strange terms may annoy at first, they are easily learned and make for accuracy and avoid a voluminous amount of description of posture.

When two loops are on the same digit, to "navaho" is to lift the proximal one over the distal one and over the tip of the digit to its palmar aspect. In making figures care should be exercised to keep loops on a digit in order, the last picked up distal. "Navaho," a term introduced by Haddon (12), is an alternative spelling for Navajo—the official name of a tribe of Indians in Arizona and New Mexico.

To "extend" is to stretch hands and fingers apart sufficiently to hold the string taut and exhibit the figure at a certain stage.

Two movements, which are world-wide, will be referred to as "Position 1" and "Opening A."

Position 1 (fig. 1, *a*). Hold string on thumbs. Little fingers pick up ulnar thumb string. (The last sentence might read: pass little fingers from proximal side into thumb loops and extend.) The resultant figure is composed of a left palmar string, a right palmar string, a radial thumb string, and an ulnar little finger string.

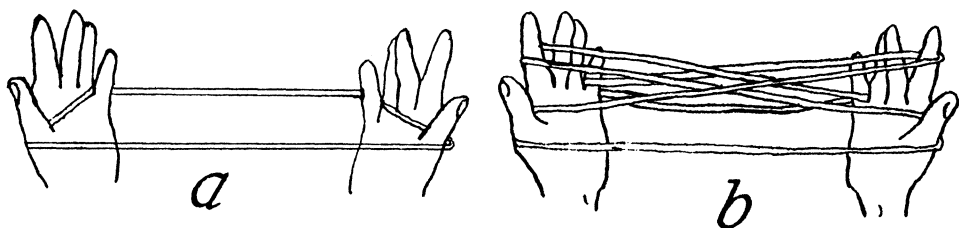


FIGURE 1.—Preliminary movements in making string figures: *a*, Position 1; *b*, Opening A.

Opening A (fig. 1, *b*). Make Position 1. Right index picks up left palmar string. Pass left index from distal side into right index loop, pick up right palmar string and return. The resultant figure is composed of a loop on each thumb, index, and little finger, each with a radial and an ulnar string.

The phrase "Opening A" is also applied to similar movements of the indexes whenever there are palmar strings during the course of making a figure.

Most figures disentangle easily if the maker pulls the radial and ulnar strings of the final figure apart, taking hold of them half way between the hands.

## HAWAIIAN FIGURES MADE BY ONE PLAYER

## KU E HOOPIO KA LA or KUHAUPIO

"Up rose the sun" (*ku e hoopio ka la*) is the most famous of Hawaiian string figures. The accompanying chant is regarded as having a higher literary quality than that of other figures. It recites in turn the divisions of the island of Hawaii, alluding to some well known feature of each division, relating through metaphor a love tale. The forms of the figures perhaps contain ancient symbols. The chant is known to many Hawaiians who do not know how to make the string figure.

## 1. Position 1.

2. From distal side pick up left palmar string with ball of right index. Pass left index from proximal side into right index loop, and from the distal side with ball of left index pick up right palmar string. Extend, keeping indexes bent. This is Opening A made with the indexes turned down.

3. Pass indexes from proximal side into little finger loops. Release little fingers.

4. Pass little fingers from proximal side into index loops and pull down the two radial index strings and hold them securely on palms.

5. With thumbs pick up the distal ulnar index string, the one that is a straight string from index to index, and take it off indexes.

6. Pass right thumb from proximal side into right index loop. Release right index.

7. Pass right index from distal side into left index loop. Release left index.

8. Pass left index from distal side into right index loop; then from distal side into distal right thumb loop and pick this up on back of left index and draw it through right index loop, releasing right thumb from this distal right thumb loop and extend.

9. Pass ring fingers from proximal side into index loops and with balls of ring fingers pull down the ulnar index string and hold on palms behind the strings held by the little fingers.

10. Pass thumbs from proximal side into index loops and extend.

11. Pass middle fingers distal side of the strings between hands and hold them down during movements 11-13.

Pass right thumb proximal to dorsal left thumb-left index string and pick it up with back of right thumb, releasing left thumb from this string. Do not draw hands apart.

12. Pass left thumb distal to this string and proximal to the dorsal right

thumb-right index string and pick up this last mentioned string with back of left thumb, releasing right thumb from this string. Do not draw hands apart.

13. Pass thumbs from proximal side into index loops. Release indexes and middle fingers and extend.

14. There are now four radial thumb strings of which two are straight strings from thumb to thumb. One of these is shorter than the other and after leaving the thumbs, loops around the strings from the ring and little fingers, and then returns to the thumbs as a radial string that is not a straight string from thumb to thumb. If the longer string is entangled with this string, straighten it out so that it hangs free as the most proximal of the radial thumb strings.

Pass index and middle fingers of each hand distal into the thumb loops of that hand, hold between them the shorter straight radial thumb string and lift it out of the thumb loops and then, turning indexes away and up, pick it up with indexes. Release thumbs from all but the longer straight radial thumb string, the proximal thumb string, and extend the figure. (See fig. 2.)

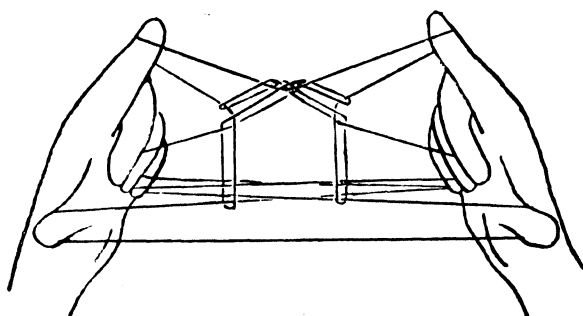


FIGURE 2.—String figure, *ku e hoopio ka la* (up rose in its curved path the sun), made on all Hawaiian islands.

Ku e ho'opi'o ka la  
Ka la i ke kula o Ahuena;  
Komo i ka la'i o Kailua la e  
O Kona.

Up rose in its curved path, the sun,  
The sun over the field of Ahuena;  
It set in the calm of Kailua.  
Then Kona.

The sun is the passionate lover; Ahuena, the loved one; the curved path of the sun, the lover bending over; the calm of Kailua, their quiet, harmonious relations.

15. A string is looped about each index loop near the index. Insert thumbs into triangles of figure just below these loops. Release indexes and then pass indexes from distal side into distal thumb loops. Release thumbs from distal thumb loops and extend gently so that the two loops across ulnar index string will not pass each other. This represents Kona (fig. 3, a).

O Kona ia o ke kai malino	That is Kona of the calm sea [the girl is smooth skinned and fair]
Ke hele la i waho o Ka-pu-lau	Which extends to the edge of Kapulau.
Kani ka 'ao i Wai-ula-ula	The <i>ao</i> is singing at Waiulaula
A ke alanui e waiho nei, a ke kanaka e hele ai, la e	At the path which lies there, that man may travel.
	[Their relations are happy.]
O Kau.	O, Kau.

16. Stretch hands further apart so that the two loops around radial index string pass each other and draw apart. This is the figure of Kau. (See fig. 3, *b*.)

O Kau ia, O Kau kua-makani, he ipukai	This is Kau, Kau the windy, the Pohina
Pohina ia na Ke-ae-loa	calabash this from Keaeloa
Lele koa'e Kau-maea la e	The <i>koa'e</i> flies away, the odor remains.
O Puna.	Then Puna.

A variant of the first line is:

O Kau nui, kua makani, ku-kohana, hauna lepo.	Great Kau, stormy back, standing alone, smelling of earth.
---	--

The stormy winds suggest a break in the friendly relations of the lovers; the *koa'e* bird is perhaps a rival who is driven off.

In the string figure the shape of a house that has been in the first two stages now has a broken roof.

17. Release ring fingers and extend. This is Puna (fig. 3, *c*).

O Puna, paia ala i ka hala, he kai e kolo ana i ka ulu hala.	Puna, walled fragrantly with hala, a sea that creeps to the hala grove.
O Ke-aau, iliili nehe olelo i ke kai o Puna la e	Ke-aau, pebbles rustling, whispering at the sea.
O Hilo.	Then Hilo.

A variant of the first line is:

O Puna, ia o ke kai kolo, e nu ana i ka ulu hala.	Puna of the creeping sea which murmurs in the hala grove.
---	---

The woman is the fragrant hala, the man the creeping sea. They went as softly as the pebbles at Keaau as they spoke together. At Puna the sea has encroached upon the land so that some hala trees now stand in the water. (The broken roof in the string figure is now mended.)

18. Pass middle fingers from proximal side into index loops and from distal side into thumb loops, that is, pass middle fingers directly toward the body. Pass indexes from distal side over radial thumb string, then to proximal side (downward) and back, picking up the radial thumb string and drawing it back through index loops. Release middle fingers and thumbs and extend. This is Hilo. (See fig. 3, *d*.)

O Hilo ia o ka ua kinakinai, ka ua mao  
ole o Hilo.  
He ua lu lehua ia no Panaewa la e  
O Hamakua.

This is Hilo of the drenching rain, the  
unending rain of Hilo.  
The lehua dripping rain of Panaewa.  
Then Hamakua.

In other words, the disapproval of their relatives fell from their ears as lehua flowers in a beating rain.

19. There are two loops about the two ulnar little finger strings near the middle of the figure. Pass right thumb from right side into the right loop

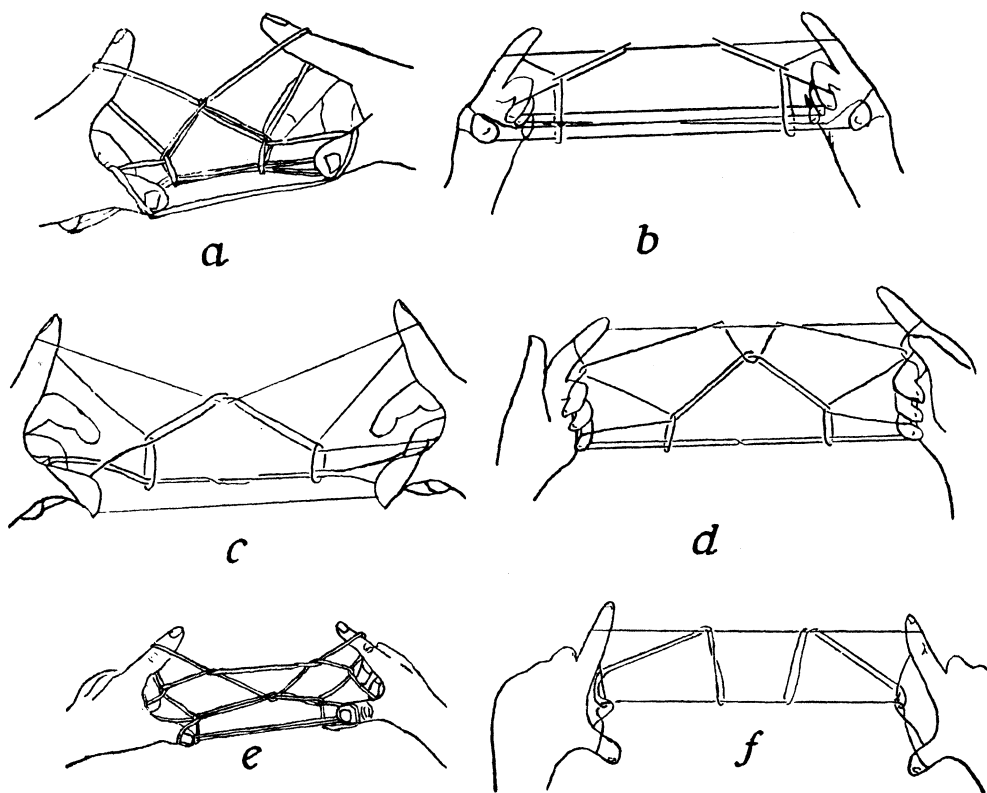


FIGURE 3.—String figures, stages of *ku e hoopio ka la*: a, "Kona"; b, "Kau"; c, "Puna"; d, "Hilo"; e, "Hamakua"; f, "Kohala."

and the left thumb from left side into the left loop and extend by pulling thumbs toward the body. This is Hamakua. (See fig. 3, e.)

O Hamakua ia, lawe i ka pali Koolau;  
Ke kuukuu ala i ke kaula, ke aki ala ka  
niho i ka ipu i ka pali o  
Kohola-lele, o Waipio a o Waimanu.

This is Hamakua with Koolau cliffs;  
Lowering rope ladders, holding fishing  
gourds in the teeth on the cliffs of  
Koholalele, Waipio and Waimanu.



A variant is:

O Hamakua ia, o ka i'a iniiniki i ka lima	This is Hamakua where the eels are pinched in the hand;
Ke ho'oku'uku'u la ka nahu la ke kaula i ka niho la e	Where the ladder is let down while the teeth hold the string.
O Kohala.	O! Kohala.

In eel fishing in Hamakua, a squid is tied to the hand and when eels stick their heads between the fisherman's extended fingers they are caught. The primitive Hawaiian ladder, a stick with crosspieces or a knotted rope, could not be climbed without use of the hands. The cliff metaphor hints of difficulties, but the lovers surmount all obstacles.

20. Release little fingers and extend. This is Kohala (fig. 3, f).

O Kohala iki, o Kohala nui, O Kohala loko, O Kohala waho, O Kohala apa- apaa.	Oh, small Kohala, great Kohala, inner Kohala, outer Kohala, Kohala of the apaapaa rain.
O Pili, o Ka-la-hiki-ola, o na pu'u haele lua.	Pili and Kalahikiola, two hills traveling together.

These hills of Kohala are said to apparently retreat as they are approached, and to journey with a person walking along the shore; sometimes one hill, and sometimes the other in advance. The names of the hills mean marriage and sunrise. Pili is also the name of a chief who came from the far land Kahiki and Kalahikiola is the name of a chiefess. These two hills then stand for the lovers as they finally travel the journey of life together.

21. Lay the final figure down and, pulling apart the two transverse strings, bring it back to the original simple loop with which it began.

O Kane-opa e ne'e ana me ka huahua, me ka ala'ala.	Lame man, limping with squid bait, a squid's inkbag.
Pa'ina, pohaka.	Snap, crack.

The lame fisherman returning with nothing but his bait is a favorite figure for anything that comes to naught, and here means simply that the string figure and story have come to an end.

#### ONE EYE, OR NENUE

By far the most popular string figures in Hawaii are those which show diamond-shaped openings of simple form which are called by the children "one eye," "two eyes," etc.—a name evidently derived from the Hawaiian word *maka* which means both "eye" and "mesh of a net." Children of all races start in the first year of school with a form of "two eyes" and consider themselves experts when they can make all forms from "one eye" to "six eyes."

The older people think these too simple but have given me Hawaiian names for the figures. (For other figures called "one eye," see p. 20.)

One eye (*nenue*) (fig. 4) is made as follows:

1. Start with string on left thumb and left little finger. Pass right thumb into hanging string from distal side, turn right thumb toward body and up. Then pass right little finger from proximal side into right thumb loop and extend. The string is then in Position 1 but with string crossed in center of figure. The string from right little finger to left thumb passes over the string from right thumb to left little finger.

2. Opening A.

3. Release thumbs. Pass thumbs over index strings and pick up radial little finger string.

Pulehu ka *nenue*.  
Ko'ala ka *nenue*.

Roasted, the *nenue*.  
Broiled, the *nenue*.

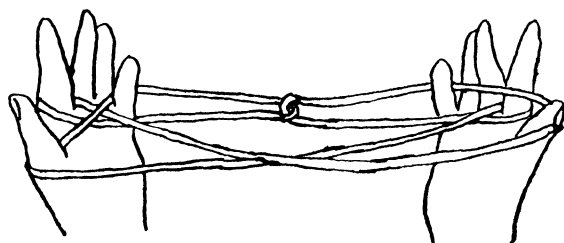


FIGURE 4.—String figure, "one eye" or *nenue*, made on Oahu.

When chanting, swing hands so that with one line, one end of the figure is uppermost; with the other line, the other end.

#### ONE EYE OR KUMUWAI O PUNA

The Kumuwai o Puna is a pool whose waters are said to have the quality of making a swimmer's skin appear white, turning a Hawaiian temporarily into a white person.

1. Opening A.

2. Release little fingers. Pass little fingers over index strings and pick up ulnar thumb string. Release thumbs.

3. Pass thumbs over index strings and pick up ulnar little finger string.

4. Thumbs pick up radial index string between palmar string and index. Navaho thumbs.

5. Put indexes from distal side into the small triangles near thumbs. Release little fingers and extend, holding left hand low with palm toward

body and fingers pointing to right, and holding right hand high with palm turned away from body and fingers pointing toward left. (See fig. 5.)

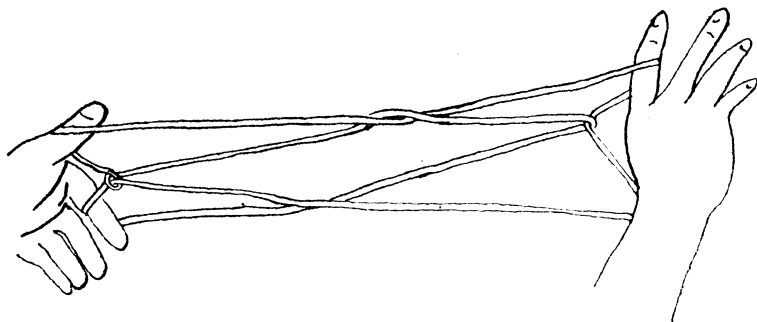


FIGURE 5.—String figure, "one eye" or *kumuwai o Puna* (spring of Puna), made on Kauai.

#### ONE EYE, AHAMAKA, or PALAI HUNA NUI

1. Opening A.
2. Release thumbs. Pass thumbs under figure and pick up with backs of thumbs the ulnar little finger string and bring it back under the figure.
3. With thumbs pick up ulnar index string.
4. Lift the proximal radial thumb string, that which passes straight from thumb to thumb, over the other radial thumb string and off thumbs.

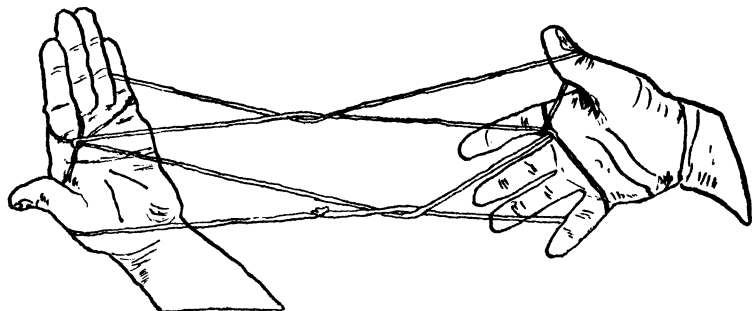


FIGURE 6.—String figure, "one eye," called *ahamaka* (hammock) on Kauai, and *palai huna nui* (extreme shyness) on Niihau.

5. Twist right hand inward under strings until palm is up and fingers pointing toward left and slightly inward. At same time straighten left arm and lower left hand, palm up with fingers pointing away, as though laying a baby down. Tell the story while making the last movements.

A mother's baby cried and she put it down in an *ahamaka* on the lanai outside the house while attending to her work. Later the baby was gone and the mourning mother never again made a mat for an *ahamaka*.

To make the baby disappear hold hands, palms facing, fingers pointing outward.

TWO EYES, METHOD NO. 1, KOKO O MAKALII, OR PAPIO-MAKA-NUI

"Two eyes" is by far the most widely known figure in Hawaii today. Children of all races learn it in their first year in school. It is made by three methods and also is formed as a change from more elaborate figures. (See pp. 43, 67, 101.) Its simplicity suggests that it might be arrived at independently in many parts of the world, but though other figures with two diamonds are common, methods 1 and 2 of this figure seem native only to Hawaii. Jayne was taught it by an Osage Indian (18, p. 28) and it is found in Great Britain but is evidently native in neither place. It probably came from the Pacific (3, p. 26). The movements are not British.

1. Hold string on left thumb and right thumb and index. Pass left index between right thumb and index on distal side of the dorsal right thumb-index string and with ball of left index pull this string toward left. Turn left index away and up and extend.

2. Thumbs pick up radial index string.

3. Pass little fingers distal side of index string and pick up ulnar thumb string. Release thumbs.

4. Pass thumbs distal side of index loop and pick up radial little finger string.

5. Pass thumbs from proximal side into index loop between index fingers and palmar strings. Navaho thumb loops. (This last is easily done by pointing thumbs toward each other and twirling them round proximal radial thumb string.)

6. Put indexes into triangles near thumbs from distal side and extend figure by stretching indexes away from body under (proximal side of) all strings. To show figure hold hands, fingers up, palms outward (fig. 7, a).

TWO EYES, METHOD NO. 2

1. Opening A.

2. Release thumbs and passing them over (distal side of) index loop, pick up ulnar little finger string.

3. Make movements 5 and 6 of "two eyes" method no. 1.

This is the method taught Jayne by an Osage Indian student at Hampton (18, p. 28). A Natal figure (11, p. 148) *isefuba S'encala* (spectacles) is the same if the word "far" is substituted for "nearer" in the fourth line of the description, where perhaps there is an error.

## TWO EYES, METHOD No. 3

1. Put loop on big toe and make one turn around toe.
2. Put both hands into long loop from below; then to right and left (right hand to right, left hand to left) over strings; down; and up the middle.
3. With index of each hand take hold of the small toe loop and draw it out to full extent. Slip strings off wrists and extend. (See fig. 7, *b*.)

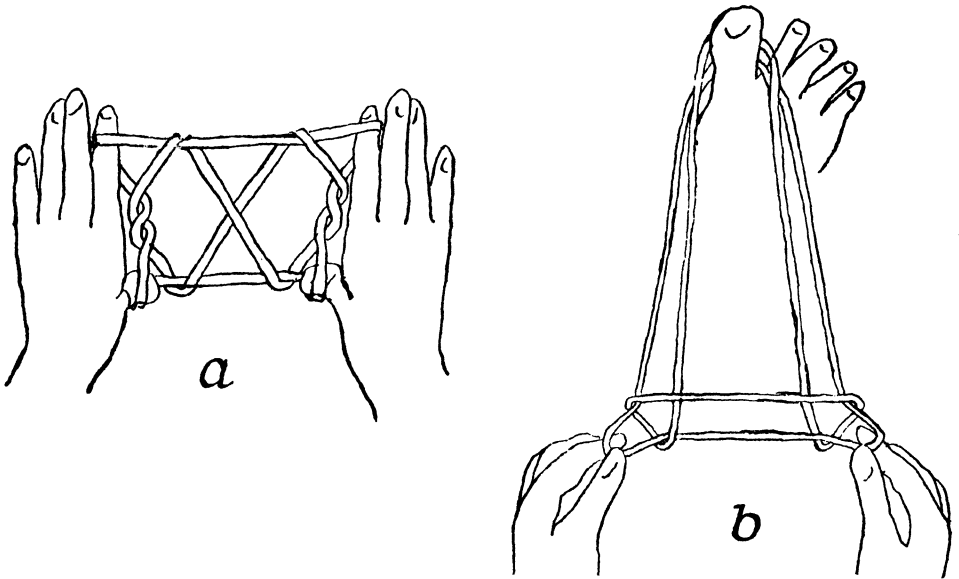


FIGURE 7.—String figure: *a*, “two eyes,” made on all Hawaiian islands, called *koko o Makalii* (calabash net of Makalii) at Kona, Hawaii, and *papio-maka-nui* (*papio* fish with big eyes) on all Hawaiian islands; *b*, “lighthouse,” made on Oahu and Kauai.

This stage is “lighthouse.” It is made in West Africa as “bat” (24, p. 134); in Tonga as *ipu sioata* (drinking glass) (17, p. 64); in Fiji as *wangga-ni-Viti* (Fijian canoe) (17, p. 22); in North Queensland as “pouch” (18, p. 376); and in New Caledonia without name (4, p. 213).

4. Put middle, ring and little fingers from proximal side into index loops, turn hands toward body and raise fingers until the strings looped around the four strings from the toe form a parallelogram.

This figure is “well.”

5. Pass thumbs from proximal side into the loops held by hands and release fingers; then pass each index from the proximal side between the two strings on its side of toe, then toward body over the transverse string nearest toe, down, around this string, and up outside of the strings leading to toe.

## 6. Release toe and extend.

Though Hawaiian school children go barefoot, this method of making "two eyes" is least used. It is probably a Hawaiian development of the "lighthouse" and "well."

When naming this figure "calabash net of Makalii" say:

Hiu ai la kaupaku Hanalei  
I na mapuna wai a ka naulu.

Hung up on the ridgepole of Hanalei  
To the water-springs of the dense cloud.

This chant was collected in 1888 in Kona, Hawaii, by J. S. Emerson and published at Vassar College in 1924 (5, p. 10). It alludes to a legend that the demigod Makalii, who lives in the Pleiades, in anger gathered all food in a calabash and hung it out of reach and a rat climbed the black shining cloud of the god Kane and gnawed a hole through the calabash and net and let the food fall down, ending the famine. The two diamonds of the figure show where taro and sweet potato, the principal foods, were put, and the small triangles on sides of figure where articles such as banana, yam, arrowroot, and fernroot were placed. Where strings cross in the center is where the hole was gnawed.

Papiomakanui (papio-fish-with-big-eyes) is a much more common name for this figure. All similar figures with three to six diamonds in a line are called "papio fish with small eyes." (See "three eyes" and "four eyes," pp. 23-30.) The chant said in making any of these figures is:

Auhea oe, e papio-maka-nui e ike mai oe  
ia'u.

Mai waiho oe a hala ka manawa alaila oe  
manao mai ia'u e papio-maka-liilii.

Listen, look at me like a large eyed *pa-*  
*piao* (friendly).

Don't delay, or my feelings may change,  
and you'll find me a small eyed *pa-*  
*piao* (unfriendly).

## THREE EYES A, METHOD NO. 1, OR PAPIO-MAKA-LIILII

At least ten figures with three diamonds in a row have been reported from Torres Strait, New Zealand, Caroline Islands, Marquesas Islands, and Philippine Islands, but this figure, made three ways in Hawaii, is not found elsewhere.

1. String on left thumb and left index, hanging down palm of left hand. Pass right index to left between left thumb and index over the dorsal left thumb-left index string and with ball of right index pick it up and draw it to right, twisting right index toward body and up, straightening it. Extend.

2. With right thumb pick up the palmar string proximally between left ulnar thumb string and left radial index string, and extend.

3. Pass little fingers distal to index strings and pick up ulnar thumb string.

4. Pass thumbs proximal into index loops between index fingers and palmar string and pick up radial index string.
5. Navaho thumb loops.
6. Put indexes into triangles near thumbs from distal side. Release little

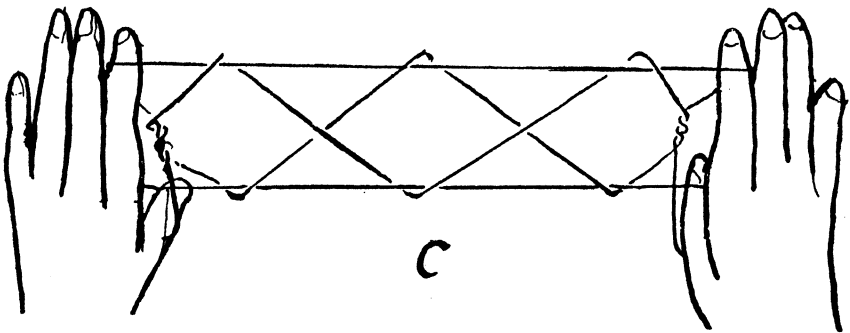
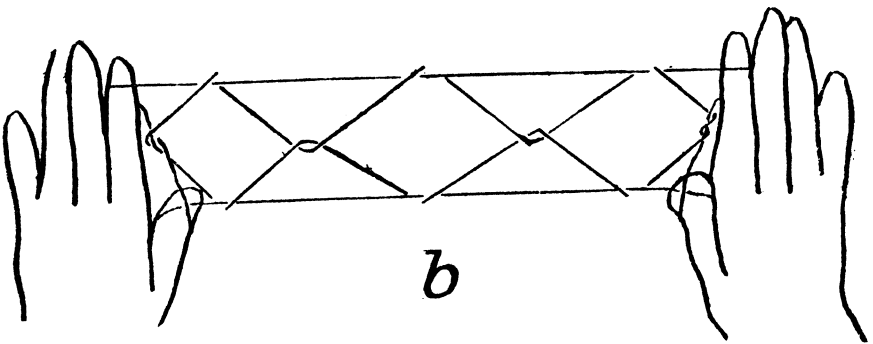
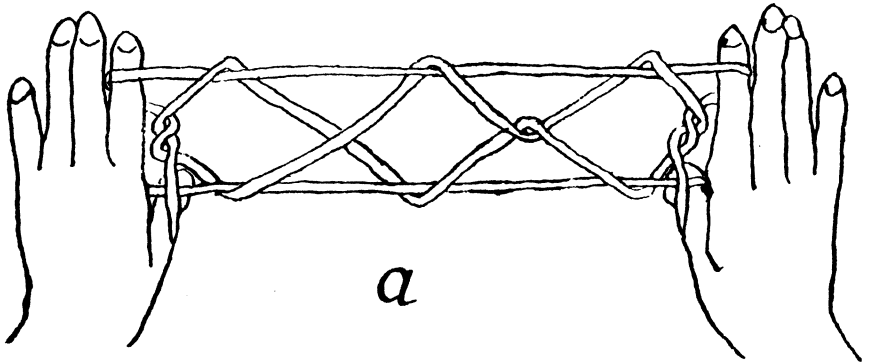


FIGURE 8.—String figure, “three eyes” or *papio-maka-liilii* (*papio* fish with small eyes): a, made on Oahu and Kauai; b, made on Oahu; c, made on Oahu.



fingers and extend figure by stretching indexes away and up. Hold hands, palms turned away, fingers up.

The chant is the same for "two eyes" (p. 23).

7. A second person now passes hand and arm through the central diamond. The maker of the figure sways figure to right and left, then pulls to right and releases left hand. The arm of second player will be freed from the string. If the first player's right hand should be released, the second player's arm would be caught.

This slip trick may be accomplished with any three diamond figures (18, pp. 42, 145-6). (See fig. 8, *a*.)

### THREE EYES A, METHOD NO. 2

String on left thumb, and right thumb and index.

1. Pass left index between right thumb and index on distal side of the dorsal right thumb-right index string, and with ball of left index pull this string toward left. Turn left index away and up and extend.

2. Pass thumbs from proximal side into index loops and extend.

3. Pass little fingers distal side of index string and pick up ulnar thumb string. Release thumbs.

4. Twist left index loop by turning left index away, down, toward body, under its loop and up. Twist left little finger loop similarly.

5. Pass thumbs distal side of index loop and pick up radial little finger string.

6. Pass thumbs from proximal side into index loop between index fingers and palmar strings. Navaho thumb loops.

7. Put indexes into triangles near thumbs from distal side; release little fingers and extend, stretching indexes away and up. Hold hands with fingers up, palms turned away.

### THREE EYES A, METHOD NO. 3

1. Opening A.

2. Release thumbs. Twist left index and left little finger loop by turning these fingers each away, down, toward body under its loop and up.

3. Pass thumbs distal side of index loop and radial little finger string and pick up ulnar little finger string.

4. Pass thumbs from proximal side into index loops between index fingers and palmar strings. Navaho thumb loops.

5. Put indexes into triangles near thumbs from distal side; release little fingers and extend. Hold hands with fingers up, palms turned away.

## THREE EYES B, or PAPIO-MAKA-LIILII

This figure differs from both "three eyes A" and "three eyes C" in that the side points of the central diamond are both made with looped strings.

1. Make "two eyes." If method no. 2 of "two eyes" is used, be sure to take up first the left palmar string in making Opening A; if method No. 3 of "two eyes" is used, make the turn about the toe with the left toe string.

2. Place figure on lap, proximal side up.

3. Release left thumb and replace it in its loop from distal upper, side of that loop. Remove right hand and pass right index into figure just beyond central cross and right thumb, just toward body from central cross. Pass all thumbs and indexes under intervening strings and up left diamond, picking up figure, and extend.

4. Pass little fingers from proximal side into index loops. Right little finger hooks down on palm the radial index string and left little finger hooks down the string that runs from center of ulnar index string to middle of left side of figure.

5. Pass indexes from distal side into thumb loop, around ulnar thumb string and back to original position.

6. Pass thumbs from proximal side into index loop and release indexes.

7. Pass indexes from distal side into thumb loop; then distal side of proximal radial thumb string and around this string and back to position. Release thumbs.

8. Thrust thumbs from proximal side into the two side triangles of figure whose apexes are in the radial index string; then, picking up the bases of these triangles with the radial sides of thumbs, pass thumbs past distal side of ulnar little finger string, then around this string. Release little fingers and extend.

For chant see "two eyes." (See fig. 8, b.)

## THREE EYES C, OR PAPIO-MAKA-LIILII

This form of *papio-maka-liilii* differs from "three eyes A" and "three eyes B." The side points of central diamond are both made with crossed strings.

1. Make "two eyes." If method no. 3 of "two eyes," is used, make the turn about the toe with the left hand toe string. If method no. 2 is used, be sure to take up left palmar string first.

2. Place figure on lap, proximal side of figure up.

3. Release left thumb and replace it in its loop from the former distal, upper, side of said loop. Remove right hand and pass right index into figure just beyond center cross and right thumb down into figure just toward

body from central cross. Pass all thumbs and indexes under intervening strings of left diamond and up left diamond, picking up figure and extend.

This makes *awa lau o Puuloa* (awa leaf of Puuloa.)

4. Right little finger hooks down ulnar right thumb string. Left little finger hooks down the string that runs from middle of radial thumb string to middle of left side of figure; middle fingers move from proximal side into index loops and hook down radial index strings, while indexes are passed distal side of radial thumb string and around this string, picking it up and pulling it back through the index loop. Release thumbs.

5. Pass thumbs from distal side into middle finger loops. Release index loop letting it fall upon thumbs as a distal thumb loop.

6. Pass indexes proximal to the distal radial thumb string and distal to the proximal radial thumb string and around this string (the straight string from thumb to thumb) picking it up. Release thumbs.

7. Pass thumbs from distal side into middle finger loops, then with them push the ulnar middle finger string past and on side of ulnar little finger string, then pass thumbs around ulnar little finger string, picking it up. Release all but thumbs and indexes and extend. (See fig. 8, c.)

#### FOUR EYES A, METHOD NO. 1

Of the six methods of making *papio-maka-liili* in Hawaii, only one, "four eyes A," method no. 2, is reported elsewhere. This is made in Yoruba, West Africa, as *anwon*, meaning "calabash net" (12, p. 36; 24, p. 132) and in South Africa as *amadande* (11, p. 145). Jayne reports it made by an Osage Indian student at Hampton, Virginia, and in Ireland (18, p. 24). The Indian probably learned it from whites, for he knew no string figures not known in Scotland and Ireland, and in the British Isles it was very likely learned from sailors (3, p. 6).

This figure, made differently, is found in Andaman Islands as "imperial pigeon" (12, p. 70), is made by Patoman Indians of British Guiana as *pis*, "river" (22, p. 11); and in New Zealand, is made by two players, as "Tahitenui" (1, vol. 6, p. 289; 2, p. 52). Somewhat similar figures are made in New Guinea and in Society Islands.

1. String on left thumb and right thumb and index.

Pass left index between right thumb and index over distal side of the dorsal right index-right thumb string and with ball of left index pull it toward left. Turn left index away and up and extend.

2. Pass thumbs distal side of intervening strings and pick up ulnar index string.

3. Pass little fingers distal side of index string and pick up ulnar thumb string. Release thumbs.
4. Pass thumbs distal side of index loop and pick up radial little finger string.
5. Pass thumbs from proximal side into index loop between index fingers and palmar strings. Navaho thumbs.
6. Put indexes into triangles near thumbs from distal side, release little fingers and extend, stretching indexes away and up. Hold hands with fingers up, palms turned away. (See fig. 9, *a.*)

#### FOUR EYES A, METHOD No. 2

1. Opening A.
2. Release thumbs. Pass thumbs proximal to all strings and with back of thumbs from ulnar side pick up ulnar little finger string and bring it back with thumbs proximal to all other strings.
3. Pass thumbs distal side of radial index string and pick up ulnar index string. Release little fingers.
4. Pass little fingers distal side of index string and pick up ulnar thumb string. Release thumbs.
5. Pass thumbs distal side of index loop and pick up radial little finger string.
6. Pass thumbs from proximal side into index loop between index fingers and palmar strings. Navaho thumb loops.
7. Put indexes into triangles near thumbs from distal side, release little fingers and extend, stretching indexes away and up. Hold hands with fingers up, palms turned away.

#### FOUR EYES A, METHOD No. 3

1. String on left thumb, and right thumb and index. Pass left thumb between right thumb, and index past distal side of the dorsal left thumb-left index string and with ball of index pull it toward left. Turn left index away and up and extend.
2. Pass little fingers into index loop from proximal side and pull radial index string down on palms.
3. Pass indexes distal side of thumb loop, then around radial thumb string, pulling through index loops, then straightening up indexes. (This movement is aided by holding down the ulnar thumb string with the ring and middle fingers.)
4. Release thumbs. Pass little fingers, which should be touching palms,

in ulnar direction, then distal, straightening them, so that the radial and ulnar little finger strings exchange positions, the radial becoming ulnar, etc.

5. Pass thumbs distal side of index loop and pick up radial little finger string.

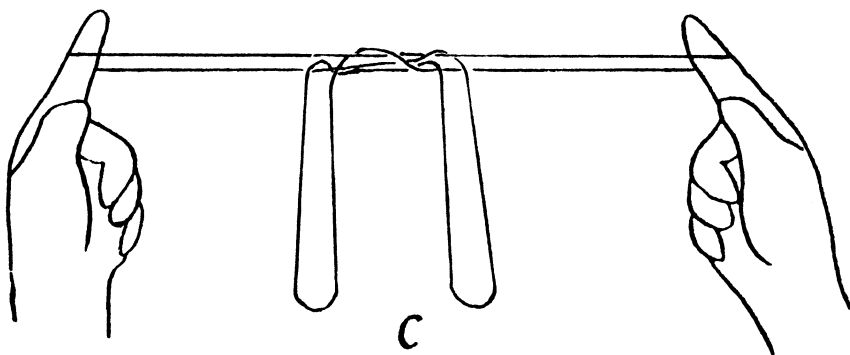
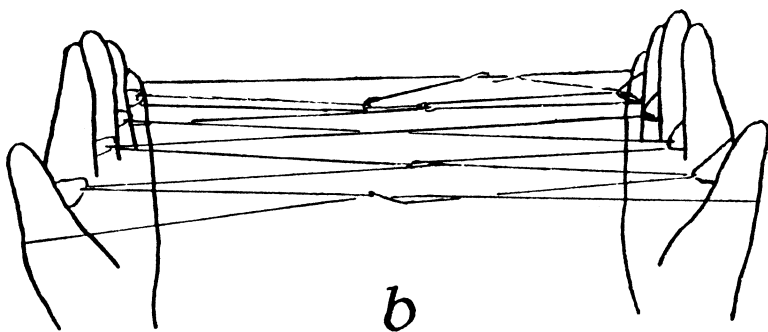
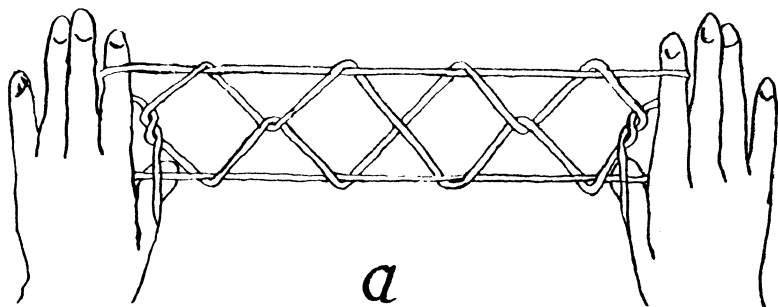


FIGURE 9.—String figure, "four eyes" or *papio-maka-lilii* (*papio* fish with small eyes): *a*, made on all Hawaiian islands; *b*, *upena* (fish net), a continuation of *a*, made on Kauai; *c*, *wain-olewa* (pendulous breasts), a continuation of *a*, made on Oahu.

6. Thumbs pick up radial index string at points between palmar strings and index fingers. Navaho thumbs.

7. Put indexes from distal side into triangles near thumbs. Release little fingers and extend, stretching indexes away and up.

The resulting figure generally needs to be worked a little to be in shape. The two central loops on the radial thumb string have often slipped past each other and should be slipped back.

This is a poor method and is not used except by those who pride themselves upon the number of ways they can make the figure.

#### UPENA

1. Make "four eyes A."

2. A second player puts his right little finger distal into first player's left thumb loop, his right thumb from distal side into first player's right thumb loop, and his right index, middle, and ring fingers into the three triangles that lie along the radial thumb string of first player.

At same time second player puts his left little finger from proximal side into first player's left index loop, his left thumb into first player's right index loop from its proximal side and his left index, middle and ring fingers into the three triangles between these loops that lie along the radial index string of first player.

3. First player releases his hands from the figure and second player turns his hands with fingers up and extends. (See fig. 9, *b*.)

#### WAIU-OLEWA A

The figure *waiu-olewa* is a popular one with which to end up another figure, being a progression from several Hawaiian figures. (See *waiu-olewa*, p. 80; *waiu-olewa*, p. 81; and *waiu-olewa*, p. 97.)

1. Make "four eyes A."

2. Lay figure on lap, proximal side up, and remove digits. Two crosses are formed where points of the two central diamonds meet the two end diamonds. Place thumb and index of each hand as though to pinch the points of intersection, thumbs toward body. Then push thumbs and indexes down, under the intervening strings and up the two central diamonds, thumb and index of right hand up the right hand of these diamonds, and those of left hand the left hand of these diamonds, and pick figure off lap and extend.

3. Pass little fingers from proximal side into index loop and hook down radial index string. With middle fingers hook down ulnar thumb string.

Indexes pass distal side of radial thumb string and around it and back, pulling it through index loop.

4. Release all but index fingers. Do not draw tight, but merely let fall strings not held by indexes. (See fig. 9, *c.*)

#### FOUR EYES B, OR PAPIO-MAKA-LILII, METHOD NO. 1

"Four eyes B" differs from "four eyes A" in having all meeting points of diamonds formed by crossed strings and not by loops.

1. String on left thumb and right thumb and index. Pass left index toward right over dorsal right thumb-right index string and with ball of index pull that string toward left, turning left index away and up while extending.

2. Pass thumbs proximal to index loop past it and with back of

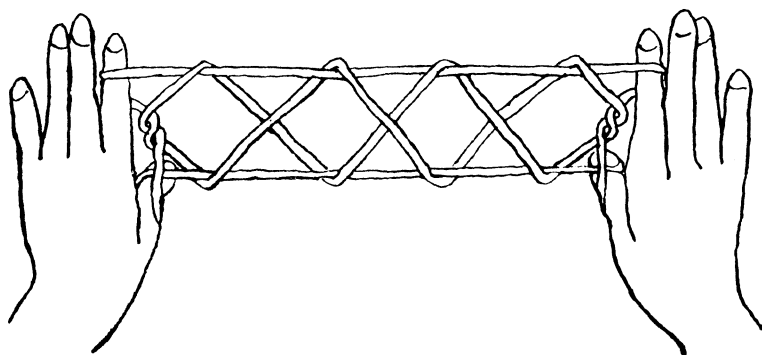


FIGURE 10.—String figure, "four eyes" or *papio-maka-lilii* (*papio* fish with small eyes), made on Kauai.

thumbs pick up ulnar index string and bring it back proximal to radial index string.

3. Pass little fingers distal to index string and pick up ulnar thumb string. Release thumbs.

4. Pass thumbs distal side of index loop and pick up radial little finger string.

5. Pass thumbs from proximal side into index loop between index fingers and palmar strings. Navaho thumb loops.

6. Put indexes into triangles near thumbs, release little fingers and extend, stretching index fingers away from body and up. (See fig. 10.)

#### FOUR EYES B, METHOD NO. 2

1. String on left thumb and right thumb and index. Pass left index toward right over dorsal right thumb-right index string and with ball of

left index pull that string toward left, turning left index away and up while extending.

2. Thumbs pick up radial index string.
3. Pass little fingers distal side of index string and pick up ulnar thumb string. Release thumbs.
4. Twist indexes and little fingers by passing each away, down, toward body, under the loop, and up.
5. Pass thumbs distal side of index loop and pick up radial little finger string.
6. Pass thumbs from proximal side into index loop between indexes and palmar strings. Navaho thumb loops.
7. Put indexes into triangles near thumbs, release little fingers and extend, stretching indexes outward and up. (See fig. 10.)

#### FOUR EYES B, METHOD No. 3

1. Opening A. Release thumbs.
2. Twist indexes and little fingers by passing each away, down, toward body, under the loop, and up.
3. Pass thumbs distal side of intervening strings and pick up ulnar little finger string.
4. Pass thumbs from proximal side into index loop between indexes and palmar strings. Navaho thumb loops.
5. Put indexes into triangles near thumbs, release little fingers and extend, turning indexes away and up. (See fig. 10.)

#### FIVE EYES, METHOD No. 1, OR PAPIO-MAKA-LIILII

1. String on left thumb and right thumb and index. Pass left index between right thumb and index over distal side of the dorsal right index-right thumb string and with ball of index pull it toward left, turning left index away and up and extend.
2. Pass thumbs distal side of intervening strings and pick up ulnar index string.
3. Pass little fingers distal side of index string and pick up ulnar thumb string. Release thumbs.
4. Twist index and little finger of one hand (either one) by passing each away, down, toward body under loop and up.
5. Pass thumbs distal side of index loop and pick up radial little finger string.
6. Pass thumbs from proximal side into index loop between indexes and palmar strings. Navaho thumb loops.



7. Put indexes into triangles near thumbs; release little fingers and extend, stretching indexes outward and up.

If in movement 4 right index and little finger are twisted in the final figure, the junction between the left hand two diamonds will be a loop and the rest of crossed strings; if the left hand index and the little finger are twisted, the junction between the right two diamonds will be a loop and the rest of crossed strings. (See fig. 11.)

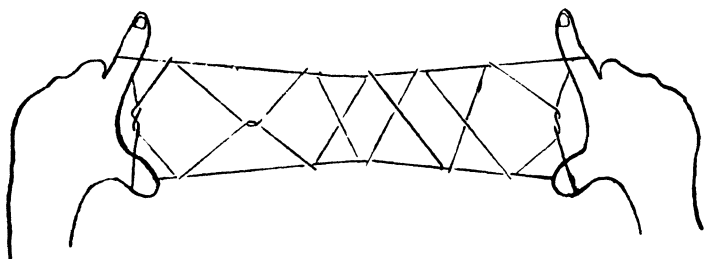


FIGURE 11.—String figure, "five eyes" or *papio-maka-lilii* (*papio* fish with small eyes), made on Kauai and Niihau.

#### FIVE EYES, METHOD NO. 2

1. Opening A. Release thumbs.
2. Pass thumbs proximal to index and little finger loops, with their backs pick up ulnar little finger string and return proximal to index strings and radial little finger string to position.
3. Pass thumbs distal to radial index string and pick up ulnar index string. Release little fingers.
4. Pass little fingers distal to index string and pick up ulnar thumb string. Release thumbs.
5. Twist index and little finger of one hand (either one) by passing each away, down, toward body under the loop and up.
6. Pass thumbs distal side of thumb loop and pick up radial little finger string.
7. Pass thumbs from proximal side into index loop between indexes and palmar strings. Navaho thumb loops.
8. Put indexes into triangles near thumbs; release little fingers and extend, stretching indexes outward and up.

If in movement 5 right index and little finger are twisted, the junction between the left hand two diamonds of the figure will be a loop, and the other junctions between diamonds will be of crossed strings; if fingers of the left hand are twisted, the junction between the right two diamonds will be a loop.

## SIX EYES, METHOD NO. 1, OR PAPIO-MAKA-LILII

1. Opening A. Release thumbs.
2. Pass thumbs proximal side of index loop and with back of thumbs pick up ulnar index string and bring it back proximal side of radial index string.
3. Pass thumbs distal side of radial index string and pick up radial little finger string. Release little fingers.
4. Pass little fingers distal side of intervening strings and pick up radial thumb strings. Release thumbs.
5. Pass thumbs distal side of index string and pick up radial little finger string. Release little fingers.

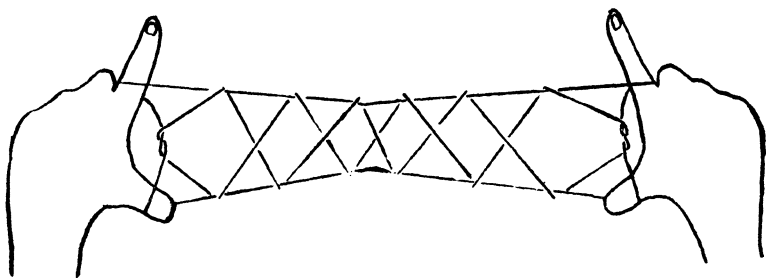


FIGURE 12.—String figure, "six eyes" or *papio-maka-lilii* (*papio* fish with small eyes), made on Oahu and Kauai.

6. Pass little fingers distal side of index strings and pick up ulnar thumb string.
7. Pass thumbs from proximal side into index loop between indexes and palmar strings. Navaho thumb loops.
8. Put indexes into triangles near thumbs formed by the palmer strings looping around thumb loops; release little fingers and extend, turning indexes away, and up. (See fig. 12.)

## SIX EYES, METHODS NOS. 2 AND 3

Make movements exactly as in "five eyes," methods nos. 1 and 2, except that in movement 4 of "five eyes," method no. 1 (p. 32) and movement 5 of "five eyes," method no. 2 (p. 33), indexes and little fingers of both hands are to be twisted.

## PIKO O KAHOALII A, OR PUNAWAI O KA LANI

The figure *piko o Kahoolii* was shown me in San Francisco in 1915 by a Maori at the Pan-Pacific Exposition, and was called *wahine* (woman).

At the ancient New Year religious ceremonies a man would represent a god, Kahoalii, and walk naked in the line of gods ahead of the feather-work idols (7, vol. 6, no. 1, p. 10).

1. Use a short string or double string, held on left thumb and right thumb and index. Pass left index between right thumb and index on distal side and to the right of the dorsal right thumb-index string and with ball of left index pull it toward left, turning left index away and up, and extend.

2. Pass little fingers from proximal site into index loops and hook down radial index string.

3. Bring tips of indexes together, holding indexes horizontal and pass right index and its loop from distal side into left index loop. Release left index, leaving its loop as a proximal right index loop. Then pass left index

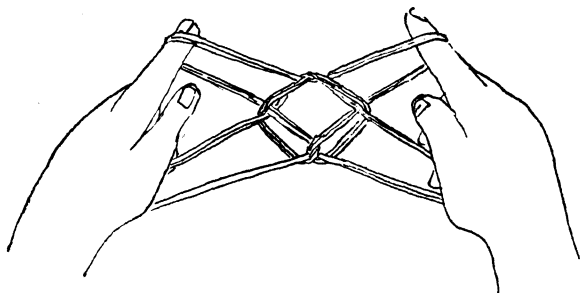


FIGURE 13.—String figure, *piko o Kahoalii* (navel of Kahoalii) or *punawai o ka lani* (spring of the high chief), made on all Hawaiian islands.

from distal side into right index loop and pick up the distal right index loop and take it off right index. Thus the two index loops have been exchanged.

4. Pass thumbs from proximal side into index loops. Release indexes.

5. Pass indexes from distal side into thumb loops, then proximal to the distal radial thumb string and distal to the proximal radial thumb string (the straight string from thumb to thumb), around it and back to position, taking this string back through the thumb loops. Release thumbs. (See fig. 13.)

#### HUEWAI O KUPOLOULA A

1. Use a short string or doubled string. Hold on left thumb, and right thumb and index. Pass left index between right thumb and index on distal side and to the right of the dorsal right index-right thumb string and with ball of left index pull it toward left, turning left index away and up and extend.

2. Twist right index away, down, toward body, under the index loop, and up.

3. Pass little fingers from proximal side into index loops and pull down radial index string on palms.

4. Bring tips of indexes together, holding indexes horizontal, and pass left index and its loop from distal side into right index loop and release right index leaving the right index loop as the proximal left index loop.

5. Pass right index from distal side into left index loop and pick up distal left index loop. Release this loop from left index. Extend.

6. Pass thumbs from proximal side into index loops and release indexes.

7. Pass indexes from distal side into thumb loops, then in a radial direction distal to the proximal radial thumb string, then on around it and

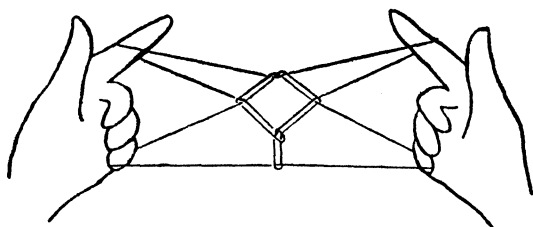


FIGURE 14.—String figure, *huelwai o Kupoloula* (water gourd of Kupoloula), made on Niihau.

back to position, picking up this string and pulling it through the distal thumb loop. Release thumbs and extend.

The neck of the gourd is the loop around radial little finger string. (See fig. 14.)

The accompanying chant is as follows:

Auhea oe, kuu huelwai, i ike aku au i ka  
io o loko.  
Kuu ike aku i ko piko mikomiko hoi  
oloko.

Hail, my watergourd, whose body I have  
known.  
I have known you to your middle, de-  
licious indeed.

#### NA ALU LEHA O LALO

1. Use a short string or doubled string. Hold on left thumb and right thumb and index. Pass left index between right thumb and index on distal side of and over the dorsal right thumb-index string and with ball of left index pull it toward left, turning left index away and up and extend.

2. Pass little fingers from proximal side into index loops and pull down radial index string on palms.

3. With backs of thumbs pick up palmar strings from proximal and palmar side and pull them through thumb loops.

4. Pass indexes on the distal side of the transverse string nearest them, then around it and back, drawing this string through index loops

which slip off indexes leaving this string as a new index loop. At same time turn thumbs toward each other, then away from body so as to point them through the side diamonds of the figure.

Extend with indexes and thumbs pointing away from body, thumbs near palms, little fingers bent on palms. (See fig. 15.)

Say:

Na alu leha o lalo  
Leha.

Glance down at the hiding-places  
Glance down.

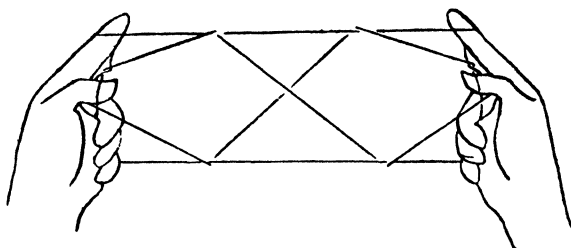


FIGURE 15.—String figure, *na alu leha o lalo* (glance down), made on Kauai.

5. Bring index fingers and thumbs back through side diamonds and say:

Lehe ka ihu o lalo.  
Mino.

His nose sticks out below.  
Smile.

The allusion is to a fisherman hunting *oopu*, a freshwater fish which hides in holes. The fisherman may see only the nose of the fish protruding.

This figure is made in New Zealand and called *hapuku* or *paemanu* (1, vol. 6, pp. 306-7; 2, p. 96).

#### HALE-KUMU-KA-AHA, METHOD NO. 1, OR HALE O KUPOLOULA

The figure *hale-kumu-ka-aha* is generally the first figure shown by an adult Hawaiian. The five-sided figure that makes the house is rare in other parts of the world. It is made in New Zealand (1, vol. 8, p. 175; 2, p. 103) where it is not a sacred house but a *whare kai* or eating house, or *whare toto kau* as contrasted with a *whare whakairo*, or *whare o Takoreke* or house with carving. Another Maori figure which begins with the *whare whakairo* ends with this figure, the *whare kai*, in which is found the *wahine* (*piko o Kahoolii*, p. 34).

Hawaiians have two explanations of the name of this figure. It may be a grass house whose timbers are fastened together with cord of coconut fiber as was the palace of King Liholiho, Kamehameha II., in 1823 (27, p. 100). (As coconut cord is strong, the name typifies, according to this interpre-

tation, strong attachment between husband and wife, or between lovers.) Or it may mean the grass house of a very high chief across the door of which was a cord or mat made of coconut fiber and a rare seaweed found far out at sea. For one not a full high chief to attempt to pass such a doorway meant instant death.

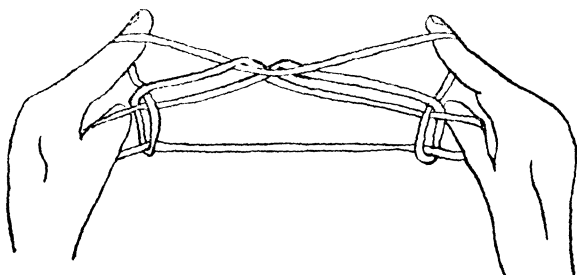


FIGURE 16.—String figure, *hale-kumu-ka-aha* (house of coconut cord or house guarded by an *aha* tapu) or *hale o Kupoloula* (house of Kupoloula), made on all islands. This figure is made in two ways, one a continuation of *na alu leha o lalo*, figure 15.

Kupoloula was an ancestor of the natives of Niihau and the name *hale o Kupoloula* is used only on that island.

1. Make movements 1-4 of *na alu leha o lalo*.
2. Pass thumbs from proximal side down into lower (ulnar) triangle of the center of the figure. Release indexes.
3. Pass indexes from distal side into thumb loop, then proximal to the distal radial thumb string and distal to the proximal radial thumb string (the straight string from thumb to thumb), around this string and back to position. Release thumbs and extend. (See fig. 16.)

#### HALE-KUMU-KA-AHA, METHOD NO. 2, OR HALE O KUPOLOULA

This is the usual method of making *hale-kumu-ka-aha*:

1. Use a short string or doubled string. Hold string on left thumb and right thumb and index. Pass left index toward right between right thumb and right index on distal side of the dorsal right thumb-right index string and with ball of left index pull this string to the left, turning it away and up, and extend.
2. Put little fingers from proximal side into index loops and pull down radial index string on palms.
3. Holding indexes horizontal, pointing toward each other, exchange index loops by passing left index from distal side into right index loop, releasing right index and letting its loop fall on left index as the proximal left index loop and then passing right index from distal side into the left

index, picking up on back of right index the original left index loop and taking it off left index.

4. Pass thumbs from proximal side into index loops and release indexes.

5. Pass indexes from distal side into thumb loops, then proximal to the distal radial thumb string and distal to the proximal radial thumb string, around this string and back to position. Release thumbs and extend.

The chants deal with the destruction of the house.

Hale-kumu-ka-aha

Kii mai nei au i ka 'aha.

Aohe aha.

House of the *aha*

I come for the *aha*

There is no *aha*.

At the last verse drop all strings from left hand (for when the sacred *aha* fails the house perishes), and then proceed to make the next figure, *huewai a Kaula*. The following chant was obtained in Kona, Hawaii, in 1888 by J. S. Emerson. From analogy with the *huewai a Kaula* figure, the house is perhaps broken:

Kii mai nei au i ka hale.

Aohe hale; pau i ka nahaha.

I come for the house.

There is no house; all broken to pieces.

At the last line pass left thumb from proximal side into center of figure and push to left and release left little finger. Then say:

Kii mai nei au i ka laau.

Aohe laau; pau i ka ha'ihai.

I come for the rafters.

No rafters; they are all broken.

Pass right thumb from proximal side into center of figure and push to right, releasing right little finger. Then:

Kii mai nei au i ka mauu.

Aohe mauu; ua pau i ka helelei.

I come for the thatch.

No thatch. All scattered.

Release indexes and extend.

#### HUEWAI O KUPOLOULA B, OR HUEWAI O KAULA

With a gourd (*huewai*) Kupoloula, chief of Niihau, son of King Kuhaimona, drank the sacred water of Kupao. Kaula was one of his guards. This gourd held the water of life of Kane. It was hidden six months' journey toward the rising sun, in the mystic Kanehunamoku, at the bottom of a hole guarded by Kanenaiau, placed there as guard by Kamohoalii, brother of Pele. Aukelenuiaiku, in order to bring to life his nephew and brothers, sought and obtained the gourd and broke its neck and cut up the net that held it (7, vol. 4, p. 923).

1. Make *hale-kumu-ka-aha* with short string or doubled string.

2. Put hands and figure on lap; right index pointing away, right little finger toward body, back of right hand up. With right thumb and middle

finger hold firmly the right hand loop over little finger strings. Take care that no string slips away from right index and right little finger during remaining movements.

3. Release all left hand loops and untangle all left hand strings on lap until two long loops stretch toward the left: a near thumb loop; and a far, index loop made of a string that passes from right thumb around right index and back to right thumb. (In the prior movement the thumb is thrust through the house in taking hold of loop.)

Movements 2 and 3 are so written because it is difficult otherwise to describe the making of this figure. The expert, instead of placing figure on the lap, drops all strings from left hand. The description given is of the method used by the inexpert and by the aged whose fingers are stiff.

4. Make a turn in thumb loop by turning nearer, radial, thumb string away from body over ulnar thumb string. Pass left index from below,

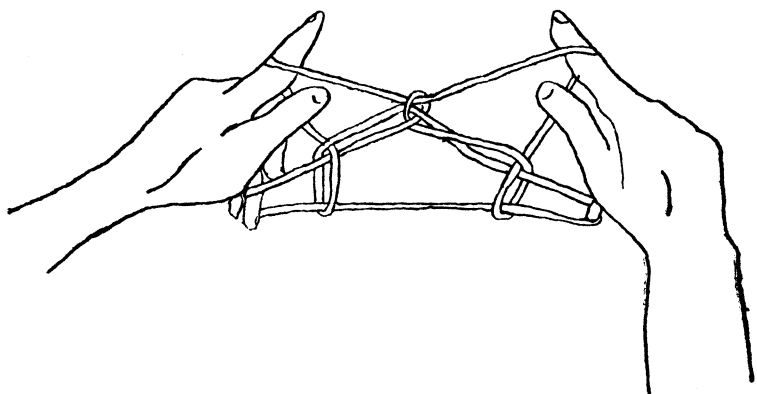


FIGURE 17.—String figure, *huawai o Kupoloula* (water gourd of Kupoloula) or *huawai o Kaula* (water gourd of Kaula), a continuation of *hale-kumu-ka-aha*, figure 16.

distal side, through thumb loop, take hold of index loop and draw it through thumb loop, it becoming the nearer loop.

5. Make a turn in the new nearer loop by turning the nearer string, an ulnar thumb string, over the further string which is the ulnar index string. Put index down through nearer loop, then over radial thumb string close to right thumb and draw this thumb string through nearer loop. Transfer left index loop to left little finger, putting left little finger into it from the lower side.

6. Pass left index proximal side of the radial right index string just to left of the small loop around it (which small loop is to become the neck of the water gourd) and pick up this string only. The radial right little



finger string may slip above the radial right index string and interfere. If so, reach above and behind it, so as to follow above instructions.

7. Pick up figure off lap and extend. The upper loop is either the water gourd or the neck of the water gourd, according to the maker. (See fig. 17.) Those who know the following chant call the entire figure the water gourd.

8.

Imi o ka lani i ka wai huna a Kupao'o

The chief went seeking for the hidden  
water of Kupao'o.

Aohe wai a ua maloo.

No water. All was dry.

"Kii mai nei au i ka huewai."

"I have come for the water gourd."

"Aohe huewai, ua nahaha."

"There's no gourd. It's broken."

At the word "broken" pass left thumb radial side of ulnar little finger string between the two small loops around it, release left little finger and push left thumb to the left.

9.

"Kii mai nei au i ka nuku."

"I have come for the neck."

"Aohe nuku, ua hakihaki."

"There's no neck, its broken off."

Release left index, pass it from proximal side into right index loop and pull it to the left.

10.

"Kii mai nei au i ka apana."

"I have come for the pieces."

"Aohe apana, ua weluwelu."

"There are none. They're broken small."

Pass right thumb from proximate side into left thumb loop. Release right little finger and pull right thumb to right.

11.

"Kii mai nei au i ka aha"

"I have come for the carrying net."

"Aohe aha, ua mokumoku."

"There's no net. It's cut to pieces."

Release indexes and extend.

There are a number of versions, substituting different Hawaiian words for "broken" in different stanzas, but all are much alike.

Another chant represents a conversation between the *elepao* bird, and an *io* (hawk).

"E! io e, e! io e.

"Oh, io! Oh, io!

Ua pa wau i ka pohaku a ke kanaka!"

The man has hit me with a stone!"

"Nowai ka hala?"

"Whose fault is it?"

"No'u ka hala.

"It's my fault.

Ke pao ana i ka huewai a ke kanaka."

Pecking holes in the man's water gourd."

"Hewa ha oe. Hookolo ia i ka hui manu  
o kakou."

"Your fault indeed. You will be tried at  
our court of birds."

## UNNAMED

1. Make *hale-kumu-ka-aha*.
2. Pass each thumb from proximal side of figure between the two strings which form roof of house; then toward the index finger of the same hand and pick up the string of roof that is nearest index. Release indexes. Thumbs will be pointing up, little fingers on palms. Both ulnar strings straight strings from digit to digit.
3. Pass indexes from proximal side into little finger loops and with balls of indexes pick up the radial little finger string; then pass indexes

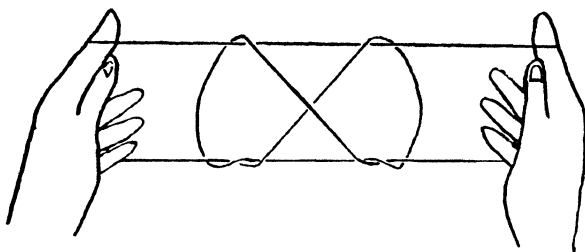


FIGURE 18.—String figure, name forgotten, a continuation of *hale-kumu-ka-aha*, made on Oahu.

from distal side into thumb loops. Release little fingers; then turn indexes away and up. Release thumbs.

4. Pass thumbs from proximal side into index loops and release indexes.
5. Little fingers pull down ulnar thumb strings on palms. Pass indexes from distal side into thumb loops; then toward body and up on radial side of slant thumb strings and on ulnar side of the straight distal radial thumb string; then around this string and back through thumb loops to position.
6. Release thumbs and little fingers; place all fingers from proximal side into index loops, spread fingers to stretch loops and pull hands apart slowly until a figure eight, lying horizontal, is formed in center of figure. The fingers may be placed into index loops from distal side by first taking the index loops on thumbs, if preferred. (See fig. 18.)

PIKO O KAHOALII B, OR KA PUNAWAI O KA LANI OR UALA POE A

For notes see *piko o Kahoalii A* (p. 34), which is a similar figure with the same titles.

1. Form *hale-kumu-ka-aha*.
2. Put thumbs between the two strings that on each side form the roof of the house, then toward the middle of the figure and then toward body, picking up inside strings of roof of house (the strings that run from radial index string to balls of little fingers). Release little fingers.

3. Put little fingers from proximal side into index loops and pull down radial index string on palms.

4. Pass each thumb from proximal side into its index loop, pick up radial index string and pull it through thumb loop, the former thumb loop slipping off.

5. Pass indexes over the transverse string and around it, pulling it through the index loops which slip off, the transverse string becoming the new index loops.

6. Pass right thumb under (distal side of) the right hand string of the two that pass from radial index string to ulnar little finger string, then

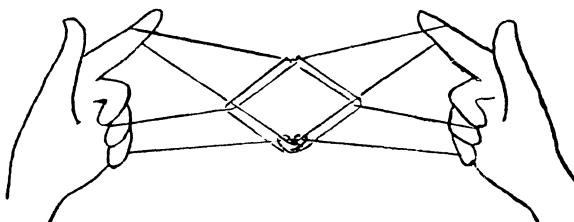


FIGURE 19.—String figure, *piko o Kahoalii* (navel of Kahoalii), *ka punawai o ka lani* (spring of the chief), or *uala poe* (round sweet potato), made on Oahu and Kauai.

over (proximal side of) the left hand one and pull left hand one toward right.

7. Pass left thumb over the cross string to left of right thumb (the one that was the right hand string of the two running from radial index string to ulnar little finger string) and pull it to the left. Release indexes.

8. Pass indexes from distal side into thumb loops, then proximal side of the slant radial thumb strings and distal side of the radial thumb string that is a straight string from thumb to thumb and around it, pulling it back through thumb loops. Release thumbs and extend. (See fig. 19.)

#### TWO EYES, OR PAPIO-MAKA-NUI

1. Make *hale-kumu-ka-aha*.

2. Put thumbs between the two strings that on each side form the roof of the house, then toward the middle of the figure and then toward body, picking up inside strings of roof of house, the strings that run from radial index string to little fingers. Release indexes.

3. Pass indexes from proximal side into thumb loops. Release thumbs.

4. Pass thumbs away outward into figure through central diamonds and pick up between strings of indexes, the radial transverse string. Release indexes and extend on thumbs and little fingers. (See fig. 7, a.)

The figure "two eyes" or *papio-maka-nui* (*papio* with large eyes) is made on Kauai.

## THE THREE HOUSES

1. String on left thumb and right thumb and index. Pass left index between right thumb and index on distal side of and past the dorsal right index-right thumb string and with ball of left index pull it toward left, turning left index away and up and extend.

2. Pass little fingers from proximal side into index loops and pull down radial index string on palms.

3. Bring indexes together, horizontal, tip to tip. Pass left index from distal side into right index loop. Release right index leaving the right index

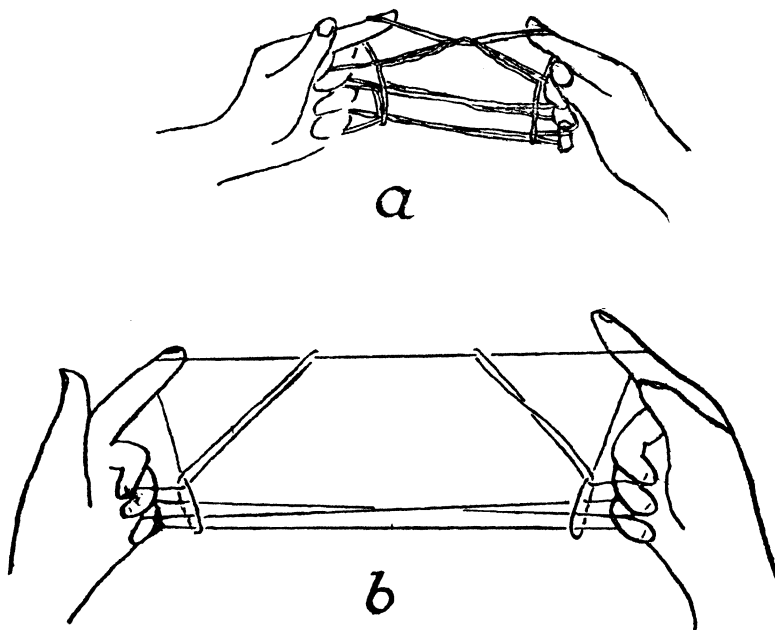


FIGURE 20.—String figures in the series “three houses”: *a*, *hale akahi* (house number one), the first of the series, made on Kauai; *b*, *hale kaupaku-ole* (house without a ridge-pole), a continuation of *a*.

loop as the proximal left index loop. Then pass right index from distal side into and pick up the distal left index loop, releasing this loop from left index. Extend.

4. Pass ring fingers from proximal side into index loops and pull down radial index string on palms.

5. Bring indexes together, horizontal, tip to tip. Pass left index from distal side into right index loop. Release right index leaving the right index loop as the proximal left index loop. Then pass right index from distal

side into and pick up the distal left index loop, releasing this loop from left index. Extend.

6. Pass middle fingers from proximal side into index loops and pull down radial index string on palms.

7. Bring indexes together, horizontal, tip to tip. Pass right index from distal side into left index loop. Release left index leaving the left index loop as the proximal right index loop. Then pass left index from distal side into and pick up the distal right index loop, releasing this loop from left index. Extend.

8. Pass thumbs from proximal side into index loops. Release indexes

9. Pass indexes from distal side into thumb loops, then toward body on distal side of the proximal radial thumb string, the one that is a straight string from thumb to thumb, and around this string, drawing it back through the thumb loop. Release thumbs. (See fig. 20, *a*.)

This makes *hale akahi* (house no. 1).

Say:

Hale iluna, hale ilalo  
Ihea hale kou?

A house above, a house below,  
Which will be yours?

that is, "Are you bound for heaven or the nether regions?"

10. Release middle fingers. Extend. This makes *hale kaupaku-ole* (house without a ridgepole). (See fig. 20, *b*.)

11. Release ring fingers and extend.

This makes *hale o Kupoloulu* (house of Kupoloulu). This last form is identical with *hale-kumu-ka-aha*. (See fig. 16.)

By analogy with other figures, the first house typifies a happy family; the broken house, a disrupted family, the upper loops indicating the separated husband and wife; and the last figure, a reunited family.

#### WAIU O HINA AND MOO-IKI A

Hina, her full name Hinakeahi (Hina-ke-ahi), was wife of Ku and mother of the demigod Maui. "Little lizard" (*moo-iki B*) (p. 47), is another figure having the same chants as *moo-iki A*.

Use a short string or a doubled string.

1. String on left thumb and right thumb and index. Pass left index between right thumb and index on distal side of and past the dorsal right index-right thumb string and with ball of left index pull it toward left, turning left index away and up.

2. Pass little fingers from proximal side into index loops and pull down radial index string on palms.

3. Pass thumbs from proximal side into index loops and release indexes.
4. Middle fingers pull down the distal ulnar thumb string on palms.
5. Pass indexes from proximal side into thumb loops close to thumbs. Release thumbs and middle fingers and extend, then drop little fingers and let the two loops hang (fig. 21, *a*).

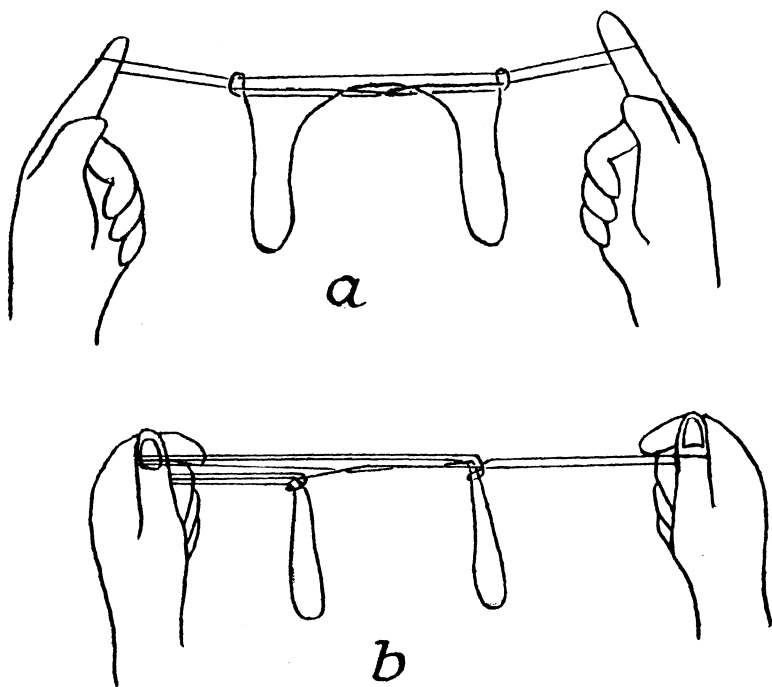


FIGURE 21.—String figures, *a*, *wainu o Hina* (breasts of Hina), made on Hawaii and Niihau; *b*, *moo-iki* (little lizard, or little one), a continuation of *a*, made on Hawaii and Niihau.

6. Reinsert little fingers in their loops. Draw the figure tight then pass left thumb distal into left little finger loop near the loop that is a hitch around strings from left index. Release indexes and left little finger loop and insert all fingers of right hand from proximal side into right little finger loop and pull the strings so that the left hanging loop passes around left thumb and back until it meets the right hanging loop.

The right pendant loop represents a wooer who begs a kiss, the left his maiden who runs away, pretending to be coy, but goes around the tree and meets him.

Say:

Moo-iki e, moo-iki e  
Honi oe i ko ihu, moo-iki e.  
Honi kaua. Honi kaua.

Little lizard, little lizard  
Give me a nose-kiss, little lizard.  
We kiss. We kiss.

I have been told also that *moo-iki* is a play on the word *moopuna* grand-child, and the person asked for a kiss is a little child.

The following chants are used also with this figure and with *moo-iki* B.

Moo-palu e, moo-palu e  
Kiina kopuni me ka huelo.  
Moo, moo iki niniau ka huelo.

Oh, lapping lizard, lapping lizard  
The chief sent for you and your tail.  
Lizard, little lizard twisted its tail.

The figure is the same as *hale-kumu-ka-aha* (fig. 27) upside down, and the final motion could be easily made with that figure. I have never seen that done in Hawaii, but in New Zealand *moo-iki* is made from *hale-kumu-ka-aha* as well as according to the following figure (2, p. 103). (See fig. 21, b.)

#### MOO-IKI B, METHOD NO. 1

The word *moo-iki* is in Hawaii a pet name for a little child. The figure and chant represent one asking for a kiss from a child, who pretends to run away but goes round a tree to meet the one chasing.

1. Opening A.
2. Pass index fingers from distal side into little finger loop and pick up ulnar little finger string on backs of index fingers.
3. Pass index fingers over radial index strings and ulnar thumb strings and under and pick up radial thumb string on backs of index fingers. Release thumbs.
4. Pass index fingers over ulnar index strings and radial little fingers string; down; toward body under all the strings, and up.
5. Pass thumbs over the two radial index strings. Pick up the three ulnar index strings. Release index fingers.
6. Pass index fingers over ulnar little finger string; down; then toward body and up between ulnar little finger string and ulnar thumb strings, picking up ulnar little finger string.
7. Pass index fingers over ulnar thumb strings, down, outward and up. Release thumbs.
8. Insert thumbs into little finger loops from proximal side. Pass indexes over radial little finger string; down from distal side into little finger loops where thumbs are, toward body and up, withdrawing thumbs.
9. Thumbs pick up the two distal radial index strings. Release little fingers and extend by spreading apart index fingers and thumbs.
10. Insert little fingers in center of figure from below. With them

take hold from the inside of the two cross strings that form the radial point, V, of the central M and pull these two strings down.

11. Release index fingers and draw tight. (See fig. 22, *a*.)

This makes *punawai o Makena A* (spring of Makena).

If little fingers are released it is *na waiu* (the breasts). (See fig. 22, *b*.)

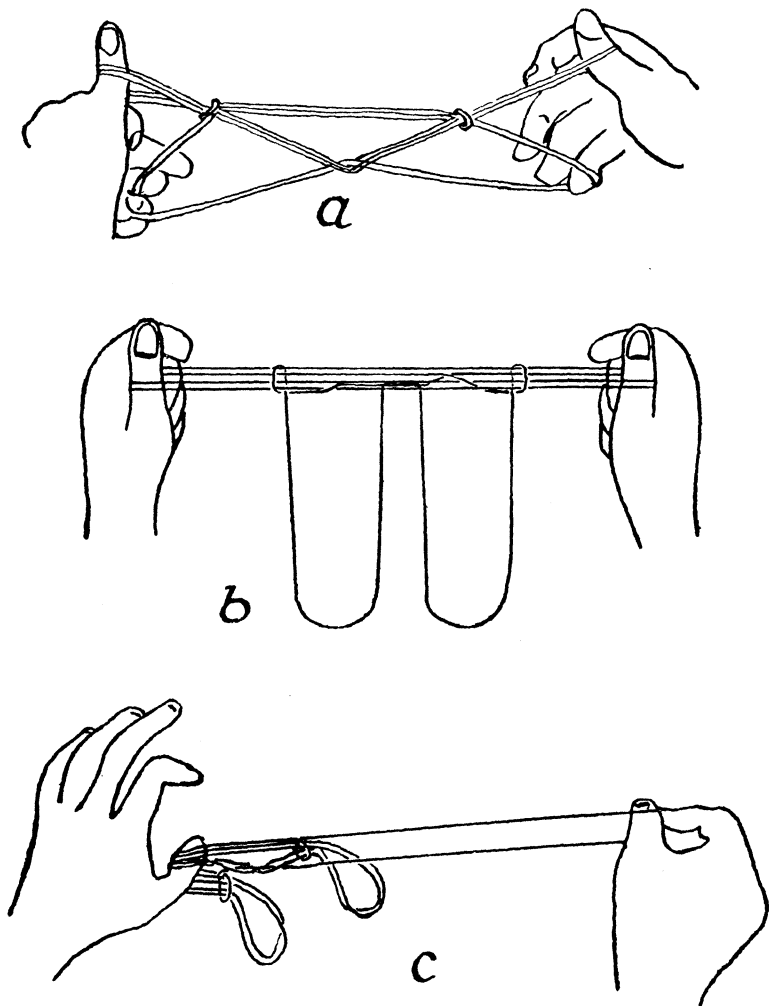


FIGURE 22.—String figures, *a*, *punawai o Makena* (spring of Makena), made on Hawaii, Oahu, and Kauai; *b*, *na waiu* (the breasts), made on Hawaii, Oahu, and Kauai; *c*, *moo-iki* (little one), a continuation of *a*.

12. Release left thumb and pass it from distal side into left little finger loop. Release left little finger.



13. Pass right index, middle, and ring fingers from proximate side into right little finger loop. Release right thumb.

14. The right pendant loop represents the one suing for a kiss, the left the child. Holding hands sufficiently taut to prevent these loops slipping, twist right hand alternately right and left, and in working it thus, gradually let the upper string slip to the left, until it slips entirely around the thumb and reaches the other loop as the last line of the chant is said. (See fig. 22, c.)

Moo-iki e, moo-iki e,  
Honi oe i ko ihu, moo-iki e.  
Honi kaua, honi kaua.

Little child, little child,  
Give me a kiss, little child.  
We kiss, we kiss.

This figure is made in New Zealand and called *moutī*. It there represents a lover trying to catch his sweetheart (1, vol. 3, p. 89, vol. 6, p. 305; 2, p. 14). In the Society Islands it is *moo* (lizard) (15, p. 66), in Tonga, *pilitaleiku* (tailless lizard) (17, p. 61); and in Fiji *tambua* (whale's teeth) (17, p. 26). Only in Hawaii and New Zealand is the motion representing chase used.

#### MOO-IKI B, METHOD No. 2

Movements 1-7 are the same as in method no. 1.

8. Pass thumbs from proximal side into little finger loops. Bend down indexes to thumbs and insert thumbs from distal side into index loops. Release indexes.

9. Pass little fingers from proximal side into thumb loops.

10. Two strings run from middle of ulnar little finger strings toward radial side of figure. With back of each index pick up the nearest of these strings. Release little fingers and extend.

11. Release proximal radial thumb string—that is, the one that is not caught near its thumb by a loop from the index finger.

This is *punawai o makena*, made by the first 11 movements of method no. 1. By transference of this stage to the same fingers as in the preceding figure the same continuation can be made.

#### KA-NUKU-O-KA-MANU

Kanukuokamanu is the name of a little promontory near Hilo Bay at the mouth of the Wailoa River, at Waiakea, Hawaii.

1. String on left thumb, and right thumb and index. Pass left index toward right between right thumb and index on distal side of and past the dorsal right thumb-right index string and with ball of index pull it toward left, turning left index away and up.

2. Twist indexes, in an ulnar direction, around their own loop.
3. Thumbs pick up radial index string.
4. Little fingers pick up ulnar thumb string. Release thumbs.
5. Thumbs pick up radial little finger string.
6. Pass thumbs from proximal side into index loops between index fingers and palmar strings. Navaho thumb loops.

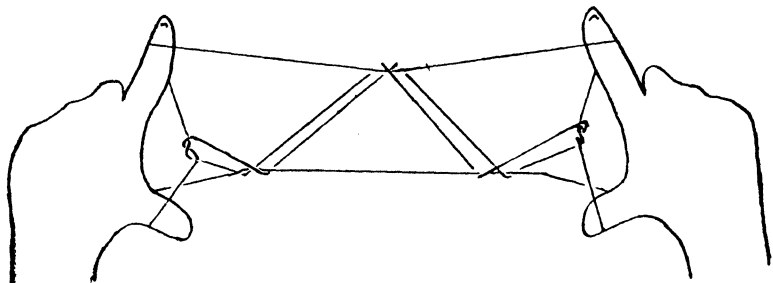


FIGURE 23.—String figure, *ka-nuku-o-ka-manu* (bird's bill), made on Hawaii.

7. Put indexes into triangles near thumbs from distal side; release little fingers and extend by stretching indexes away from you and up. If figure is too loose, work it until the bill appears, its point in the radial index string. (See fig. 23.)

#### BUTTERFLY

1. String on left thumb, and right thumb and index. Pass left index toward right between right thumb and index on distal side of and past the dorsal right thumb-right index string and with ball of index pull it toward left, turning left index away and up.
2. Pass little fingers from proximal side into index loops and pull down radial index strings on palms.
3. Pass thumbs from proximal side into index loops and release indexes. Pass indexes from distal side into thumb loops and pick up distal radial thumb strings, releasing thumbs from them. (This simply puts a twist in each index loop. The same result may be reached by taking off each index loop, twisting it and replacing it.)
4. Put indexes together, tip to tip, horizontal. Pass left index from distal side into right index loop and withdraw right index, leaving its loop as the proximal left index loop. Then pass right index from distal side into left index loop and pick up the distal left index loop, taking it off left index. Separate indexes and extend.
5. Pass thumbs from proximal side into index loops and release indexes.

6. Middle fingers hold down ulnar thumb strings. Pass indexes proximal to distal radial thumb string and distal to the proximal radial thumb string, the straight one from thumb to thumb, then around this string and back picking it up. Release thumbs and middle fingers. Extend gently keeping figure symmetrical and holding indexes high. (See fig. 24.)

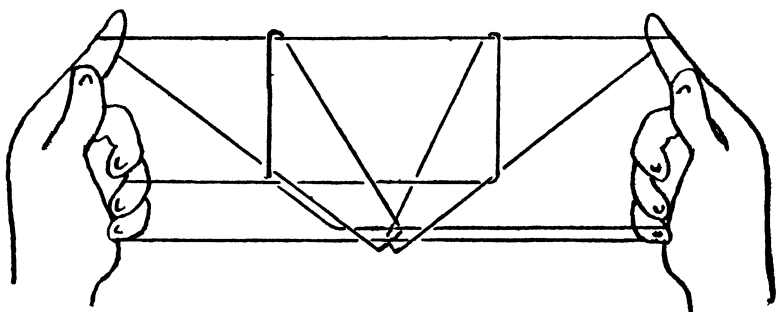


FIGURE 24.—String figure, "butterfly," made on Oahu.

#### LONOMUKU

Lonomuku was a woman born at Iwi o Pele near the hill Kauiki on Maui. Her husband was a taskmaster who made her carry the refuse a long way in two gourds (*pa-ipu*) and throw it over a cliff. She finally rebelled and with a gourd under each arm, leaped to the moon. Her husband seized one foot, and when he found he could not hold her back, bit it off. She may still be seen in the moon with a gourd under each arm, and but one foot.

1. String on left thumb, and right thumb and index. Pass left index toward right between right thumb and index on distal side of and past the dorsal right thumb-right index string and with ball of index pull it toward left, turning left index away and up.

2. Twist left index away, down, toward you under its loop and up.

3. Pass little fingers from proximal side into index loops and hold down radial index string on palms.

4. Bring indexes together, horizontal, tip to tip. Pass left index and its loop from distal side into right index loop and withdraw right index leaving its loop as the proximal left index loop. Then pass right index from distal side into left index loop and pick up distal left index loop and take it off left index. Extend.

5. Pass ring fingers from proximal side into index loops and pull radial index string down on palms.

6. Pass thumbs from proximal side into index loops. Extend.

7. While middle fingers hold strings between hands on palms, pass

right thumb to left under the string that passes back of left thumb and index and pick it up releasing left thumb. Then pass left thumb to right over the string that passes back of left index and right thumb and under the string that passes back of right index and right thumb and lift up this last mentioned string and draw it off right thumb. Extend.

8. Pass thumbs from proximal side into index loops. Release indexes.

9. Pass indexes from distal side into thumb loops and pick up the two distal radial thumb strings and release these two strings from thumbs.

10. Pass thumbs from proximal side into index loops. Extend.

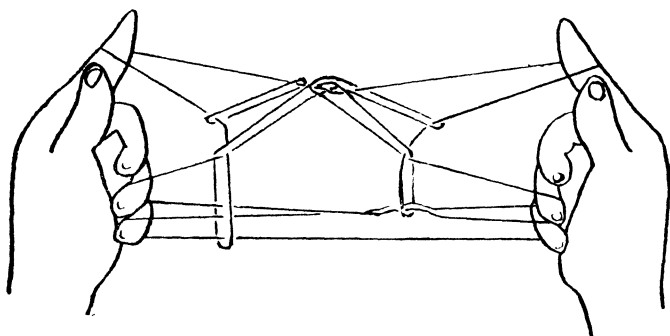


FIGURE 25.—String figure, "Lonomuku" (maimed Lono), made on Kauai.

11. Lift proximal radial thumb string off thumbs. Pass indexes toward body over this string and then around it and back to position, picking it up, the former index loop slipping off. Release thumbs and extend. (See fig. 25.)

Akahi wawai loihi.  
Akahi wawai pokole

One long leg.  
One short leg.

#### KAUIKI OR KE KUMU O KAUIKI

1. String on right thumb and index, and left thumb. Pass left index to right on distal side of the dorsal right thumb-right index string, pick up this string with ball of left index, pull out to the left and turn left index away and up.

2. Revolve right index away from body, down, toward body and up.

3. Put little fingers proximal into index loops and hook radial index string down on palms.

4. Pass thumbs into index loops from proximal side and separate thumbs and indexes.

5. Pass middle fingers over index and thumb strings and hold down on palms. Bring hands together. Pass right thumb under the string that

passes back of left thumb and index and lift it on back of right thumb. Release left thumb from this string and pass left thumb over it and under the string that passes back of right thumb and index, picking up this string and taking it off right thumb. Release index and middle fingers and draw hands apart.

6. With ring fingers pull down the proximal ulnar thumb string (the one that back of thumbs is a straight transverse string). Pass index fingers toward body proximal side of (under) the distal ulnar thumb string, then distal side of (over) the radial thumb string that is not a straight string from thumb to thumb, pull it down and pass index fingers under (palmar side of) ring finger strings. Release ring fingers; then substitute ring fingers for indexes.

7. Index fingers pick up distal ulnar thumb string.

8. Put middle fingers over index and thumb strings and hold down on palms. Bring hands near each other. Pass right thumb under string passing back of left thumb and index and lift it on back of right thumb. Release left thumb from this string and pass left thumb over it and under the string passing back of right thumb and index, picking up this string and taking it off right hand.

9. With backs of thumbs pick up radial index string. Release indexes and middle fingers and extend.

10. With middle fingers hold down ulnar thumb strings. Pass indexes from distal side into thumb loops, then proximal to the two radial thumb strings that are not transverse strings, then, pushing these two strings in an ulnar direction, pass indexes toward body on distal side of the transverse thumb string, around this string and back, picking it up and drawing it back through the thumb loops.

11. Release thumbs and middle fingers and extend, saying:

Ka'uiki, Ka'uiki, ka mauna, ka opa' ipa'i,  
E kala i ka hina, Ka'uiki.

Kauiki, Kauiki, the trembling mountain,  
Until loosened and leaning, Kauiki.

There are many versions of these two lines, and they, or similar ones occur in chants (7, vol. 4, pt. 2, pp. 373-4, pt. 3, p. 587; 7 a, vol. 2, p. 373). In each version the word *opaipai*, descriptive of Kauiki, is translated differently, which demonstrates the difficulty of translating ancient Hawaiian.

Kauiki is a cliff at the left entrance to the harbor of Hana. It is famous both in history and legend. It quivers when beaten by storm waves. It is said to tremble because shaken by the eel Laumeke who lives in a cave at its base. On the sides of Kauiki with a hollow between, are two little elevations. These are perhaps represented in the string figure by the two loops on sides of the upper part of the figure. A pillar of rock in the mouth of

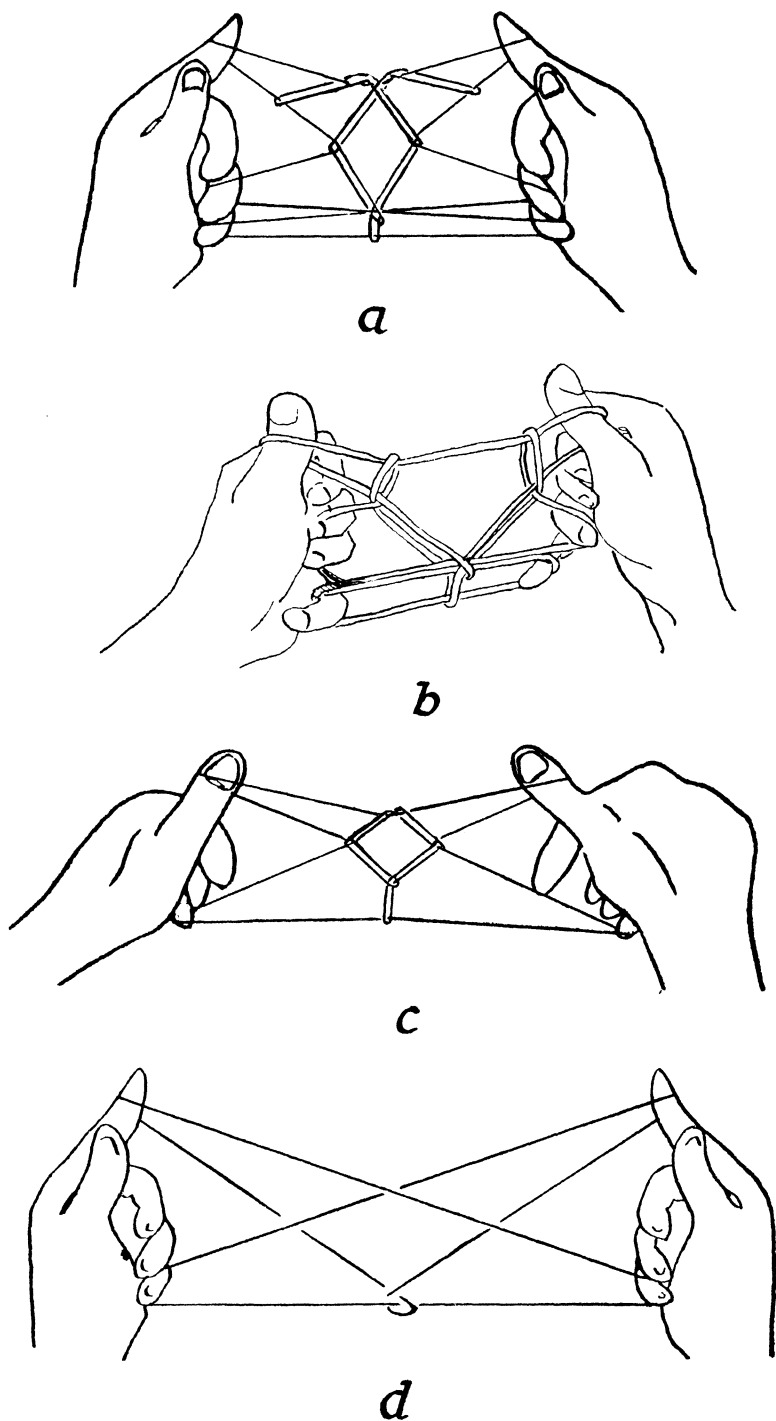


FIGURE 26.—String figures: *a*, “Kauiki,” made on all Hawaiian islands; *b*, “Honuaua and Kuawalu,” a continuation of “Kauiki”; *c*, *uala poe* (round sweet potato), *uala anau* (small ratoon sweet potato), and, on Niihau, *huerwai* (water gourd), a continuation of *a*; *d*, *papai o Honokaupu* (crab of Honokaupu), a continuation of *b*.

the cave a little behind a rock named "the eel Laumeke" is called *kumu o Kauiki*. Possibly the shape of the figure represents maimed Lono. (See Lonomuku, p. 51.) (See fig. 26, a.)

12. In extending above figure, holding the hands with palms toward body and indexes pointing slightly away, and up, strings from the radial index string are looped around the ulnar index string. Insert thumbs from proximal side of the figure into the open spaces of the figure just below (ulnar side of) these loops. Release index fingers and extend, saying:

O Honuaula, O Kuawalu!

O ke alai a Kaupo!

Pale Kaupo!

Ku mai la o Lonomuku.

O Lonomuku kai luna kai lalo!

Kai ke ka'e ka ma'i o ka wahine ohe la  
ohe la!

Apa, apa, a hewa ana makou.

He iwi no kakou a mea la ohe la.

O, Honuaula, O Kuawalu!

O, the hindrance to enjoyment!

O, the obstacle to enjoyment!

There rose Lonomuku.

O, Lonomuku, sky above, sea below,

O, the woman's body, ascending,  
ascending!

We have done great evil.

A bone of us ascending.

This appears to be a remorseful lament by the husband over the loss of his wife's society, as she went to the moon. Honuaula and Kuawalu, represented by the upper loops of the string figure, are temples near the base of Kauiki, and here typify the husband and wife. The separated loops, as generally in similar Hawaiian figures, indicate a broken family. The trembling of the mountain in the first chant, where the figure typifies a united family, perhaps is figurative of the unstable marital situation which led to Lonomuku's flight to the moon. (See fig. 26, b.)

13. Release ring fingers and with index, middle and ring fingers pull apart on radial little finger string until figure is formed. (See fig. 26, c.)

This figure is called *uala poe* B (round sweet potato), also *uala anau* (small ratoon sweet potato). On Niihau it is called *huewai* and in connection with the following chant:

Ke iia mai nei "E hele ka wai o Honu-  
aula.

Honuaula a ka huewai

Wai nuku polo ula."

One said, "Go for the water of Honu-  
aula

Red land of the water gourd.

Its mouth tied with red tapa."

14. Insert indexes from proximal side into thumb loops and withdraw thumbs. Pass thumbs from proximal side into index loops, then toward center of figure, picking up with back of each thumb the string that is looped around the index loop of its hand. Release indexes, then pass indexes into thumb loops, release thumbs and extend.

This makes *papai o Honokaupu* (crab of Honokaupu). (See fig. 26, d.)

## WAILUA

Wailua, Kauai, is a notable district in history and legend. Here, according to Kauai tradition, the first Hawaiian landed, the first heiau was built, the first sacred drum beaten. Many heiaus are here. Between the Wailua River and a branch is a ridge of land called Wailua Nui, formerly devoted to chiefs. At its foot is a rock at the base of which chiefs were born, and in this district no one was recognized as a chief unless born here. This is the birthplace of Kauai's last king, Kaumualii.

1. Use short string or string doubled. Hold string on left thumb, right thumb, and right index. Pass left index between right thumb and right index over (on distal side of) the string that passes back of right thumb and index and with ball of left index pull this string toward the left. Turn left index away and up and extend.

2. Pass little fingers from proximal side into index loops and pull down radial index strings on palms.

3. Put thumbs from proximal side into index loops and separate thumbs and index fingers.

4. Pass ring fingers toward body over index and thumb strings and hold them on palms.

5. Bring hands near to each other. Pass left thumb under string which passes back of right thumb and index and lift it on back of left thumb. Release right thumb from this string and pass right thumb over it and under the string passing back of left thumb and index, picking up this thumb and taking it off left thumb.

6. Put thumbs from proximal side into index loops. Release index and ring fingers and extend.

7. With middle fingers hold down ulnar thumb strings. Pass index fingers from distal side into middle finger loops, under the radial thumb strings that do not run straight from thumb, then toward body over the radial thumb string that does run straight from thumb to thumb, down and back, picking up this string and drawing it under the other radial thumb strings back with indexes through the middle finger loops. Release thumbs and middle fingers and extend. (See figure 27, *a*.)

Wailua nui lanai  
E ku i ka maka o Uluena.  
Huluena la o ka Manuena  
O Makakii ka waena.

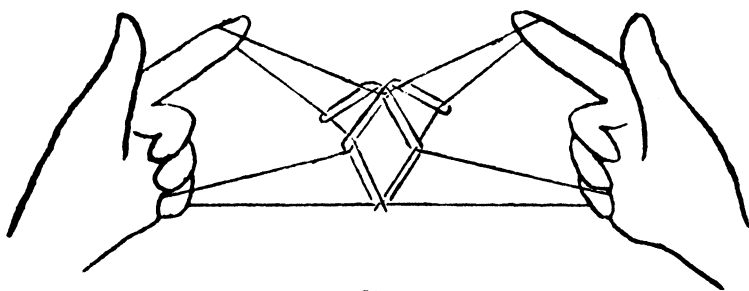
Great Wailua hump  
That stands in the eye of Uluena.  
Huluena and Manuena  
And Makakii between.

Uluena was a heiau. The places Huluena and Manuena are represented in the string figure by the loops in the upper part about the index loops, Huluena on the right, Manuena on the left. Makakii, represented in the

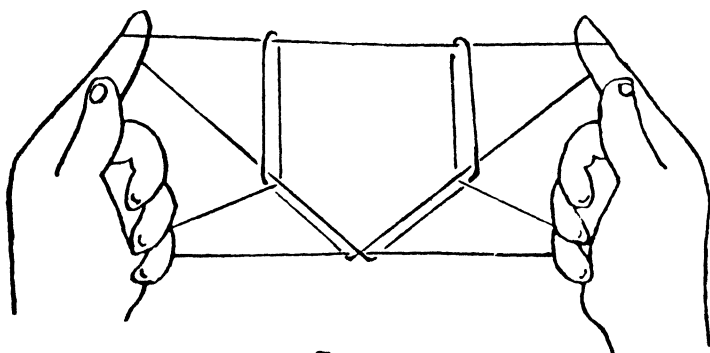


string figure by the crossing strings between Huluhena and Manuhena was a place where chiefs were conceived.

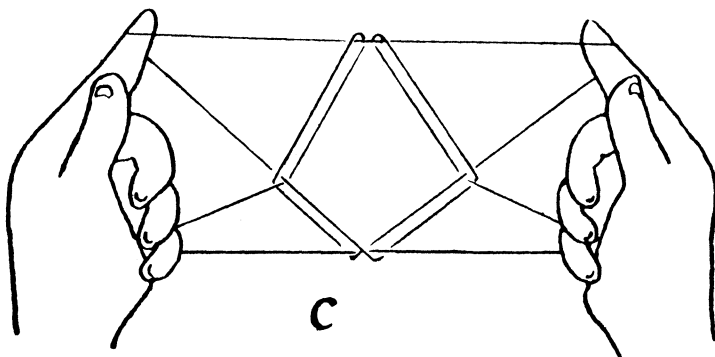
8. Hold figure with indexes up, little fingers down. Pass thumbs away from body into figure just below the loops about index loops. Release indexes. (Some players then substitute indexes for thumbs by passing indexes from distal side into thumb loops and releasing thumbs.) (See fig. 27, *b*.)



*a*



*b*



*c*

FIGURE 27.—String figures: *a*, "Wailua," made on Kauai; *b*, "Nounou and Aahoaka," continuation of "Wailua"; *c*, *punawai o Makena* (spring of Makena), continuation of *b*.

O Nounou, O Ahoaka.  
O kuamoo loa o Kane.

O Nounou. O Aahoaka.  
O long mountain trail of Kane.

Nounou and Aahoaka are two hills of Wailua between which Wailua Nui lies and the upper branch of the Wailua River runs. In the figure the two loops about the thumb strings represent the hills and the radial thumb string the mountain trail of Kane which leads up Wailua Nui, thence to the top of Mount Waialeale and to the god Kane. (See fig. 27, *b*.)

9. Turn hands so that figure will be upside down. This makes *hale o Kulanihaka A* (house of Kulanihaka).

10. Bring together the ends of the loops around the radial thumb string. This makes *punawai o Makena B* (spring of Makena). (See fig. 27, *c*.)

The word *ena*, which is an ending to three place names of the first chant, means "red hot." The first figure may tell of an ardent love affair; the second, of a quarrel, the loops representing the hills being symbols of the separated lovers; the third figure may symbolize the lovers reunited.

#### WAILUA NUI A LANAI

*Wailua Nui a Lanai* is a more elaborate figure than the preceding one. It has practically the same chant.

1. String on left thumb, and right thumb and index. Pass left index over (on distal side of) the dorsal right thumb-index string and with ball of left index pull this string toward left. Turn left index away and up and extend.

2. Thumbs pick up radial index string. Release left index.

3. Repeat movement 1.

4. Pass little fingers from proximal side into index loops and hook down radial index string on palms.

5. Pass left index with its loop from distal side into right index loop and release right index leaving the right index loop as the proximal left index loop.

6. Pass right index from distal side into left index loop and pick up distal left index loop on back of right index and lift it off left index.

7. Pass thumbs from proximal side into index loops. Release indexes.

8. With back of indexes pick the ulnar thumb string.

9. Two strings from each thumb form loops around the little finger strings. Pass middle and ring fingers of each hand through the loop nearest

them (from the palm toward the center of the figure), then with balls of middle fingers (assisted by ring fingers) pull down and through these loops the radial thumb string that is not a straight string from thumb to thumb. Substitute ring fingers for middle fingers and hold this string on palms.

10. Release indexes. Two strings from each thumb are looped around the ring and little finger strings. Pass indexes into these loops (from the palms toward center of figure) and extend.

11. With middle fingers hold down all strings between hands. Pass left thumb proximal to the dorsal right thumb-right index string and pick it up, releasing right thumb from this string. Pass right thumb distal to the string just picked up by left thumb and proximal to the dorsal left thumb-left index string, picking up the latter string and releasing left thumb from it.

12. Pass thumbs from proximal sides into index loops. Extend.

13. Pass indexes from distal side into thumb loops and pick up the two radial thumb strings that are not straight strings from thumb to thumb. Release thumbs from these strings.

14. Pass thumbs from proximal side into index loops. Then lift the two transverse radial thumb strings over the other thumb strings and off thumbs.

15. Pass indexes toward body distal to these strings just taken off thumbs, down, outward and up, thus picking up these strings on backs of indexes, making new index loops while the old ones drop off.

Release thumbs and extend. (See fig. 28.)

The figure *Wailua Nui a Lanai* is the same as *Hawaii Nui* (p. 68), though made differently and having a different chant:

Wailua Nui a Lanai  
Ke nana la i ka maka o Huena,  
O Huluena ia la ka Manuena.  
Ka Makakii ka iwaena  
O Nounou, o Aahoaka.

Great Wailua of the hump,  
Seen by the eye of Huena,  
Huluena, there is Manuena.  
Makakii between.  
Nounou, Aahoaka.

For explanation of place names see *Wailua* (p. 56).

16. From middle of radial index strings, a string is looped around each ulnar index string near the indexes. Pass thumbs from proximal side into index loops just on the further side of each of these strings from each index. Release indexes and extend gently so that the index loops just released will touch each other at middle of the radial thumb strings.

This makes *hale o Kulanihaka B* (house of Kulanihaka). (See fig. 29, a.)

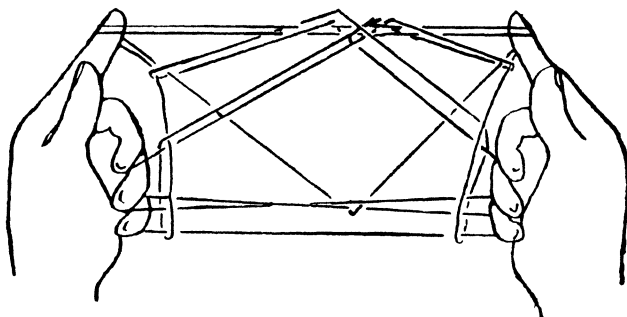
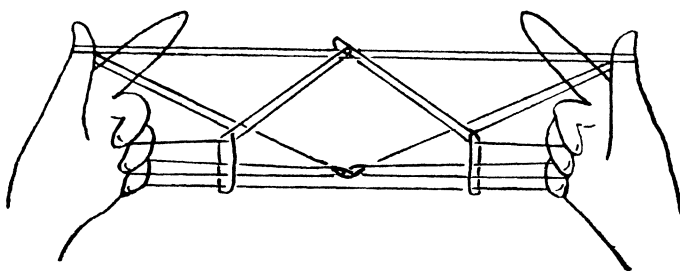
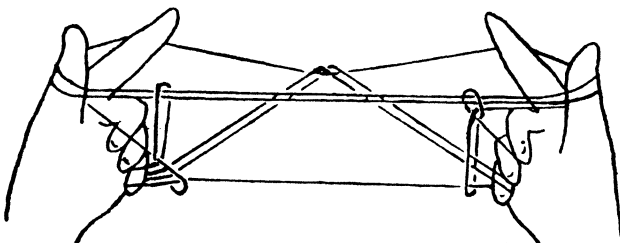


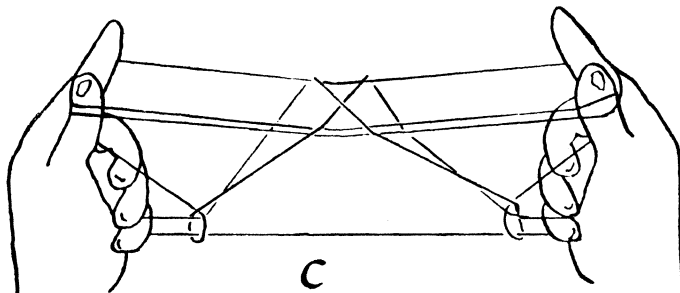
FIGURE 28.—String figure, "Wailua-Nui a Lanai" (Great Wailua of Lanai), made on Niihau.



*a*

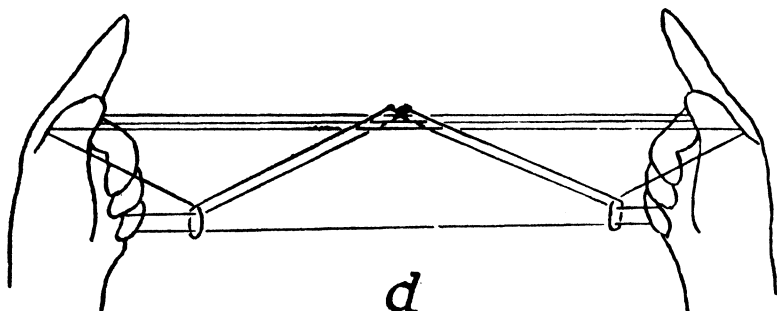


*b*

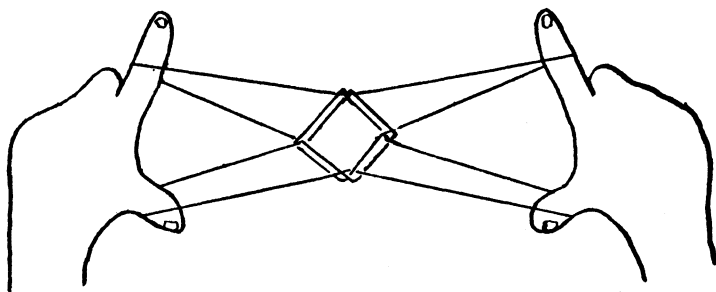


*c*

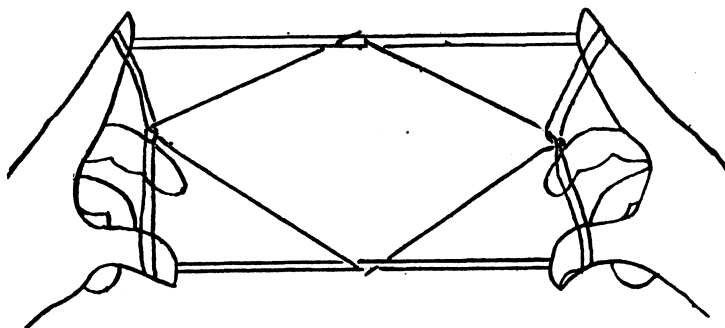
FIGURE 29.—String figures, continuations of Wailua-Nui a Lanai: *a*, *hale o Kulanihaka* (house of Kulanihaka); *b*, *punawai a Makena* (spring of Makena); *c*, *kuamoo loa a Kane* (long mountain trail of Kane).



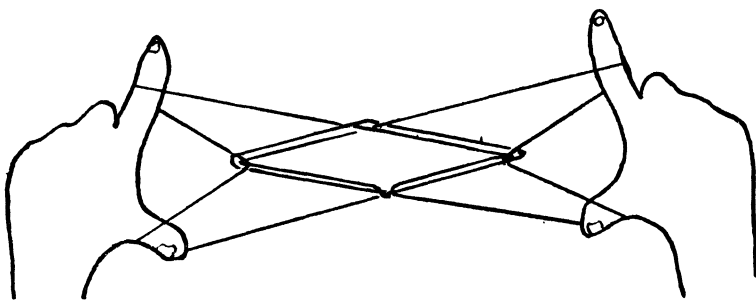
*d*



*e*



*f*



*g*

FIGURE 29 Continued.—*d*, *ka hale ku a Poloula* (the high house of Poloula) ; *e*, *piko o Kahoalii* (navel of Kahoalii) ; *f*, *ka wahine opu laalaau* (the hairy woman) ; *g*, *uwene*.

17. Indexes pick up distal ulnar thumb string.

This is *punawai a Makena* C (spring of Makena). (See fig. 29, *b*.)

This is same figure as Kaluanui (p. 68), the second figure of Hawaii Nui (p. 67).

18. Release ring fingers. (See fig. 29, *c*.)

This is *kuamoo loa a Kane* (long mountain trail of Kane). See Wailua (p. 58) for note. The figure is the same as *na hale Loulu* (p. 68).

19. Release indexes. (See fig. 29, *d*.)

This is *ka hale ku a Poloula* (the high house of Poloula).

Poloula was a chief of Wailua, Kauai, who in the legend of Laieikawai furnished a canoe to the seer Hulumaniani, who from the top of Peak Kala-lea had seen a rainbow on Oahu which indicated birth of a chiefess, and by which he might seek the new born.

20. Pass indexes from proximal side into distal thumb loops, release thumbs and extend. (See fig. 29, *e*.)

This is *piko o Kahoalii* C (navel of Kahoalii). See *piko o Kahoalii* A (p. 34) for note on different figures of same name.

In New Zealand this figure, made differently, is *wahine* (woman) (1, vol. 3, p. 144; 2, p. 20) in Marquesas Islands, *ipu ava Akau*i (awa bowl of Akau) (15, p. 31); in Society Islands *honu vahine* (female turtle) (15, p. 72); in Tonga *humu* (coal hole) (17, p. 69); in Fiji *tavola* (17, p. 47); in Central Africa *mwezi* (moon) (12, p. 31; 6, p. 129); in British Guiana, "star" (22, p. 12).

21. Hold figure on lap, hands with backs down and indexes and little fingers pointing up—that is, distal side of figure down. Release indexes from figure and reinsert them from above into former index loops. Release little fingers and reinsert thumbs from above into former little finger loops. Pass thumbs and indexes under intervening strings to center of figure, up center and extend. (See fig. 29, *f*.)

This makes *ka wahine opu laalaau* (the hairy woman).

In the Marquesas Islands, this figure, made from the preceding one, is called, as is the preceding figure, *ipu ava Akau*i (awa bowl of Akau) (15, p. 31); in Society Islands, *honu tane* (male turtle) (15, p. 72-3); in Tonga, *toloa* (Southern Cross) (17, p. 69); in Fiji, *drau-ni-ivi* (chestnut leaf) (17, p. 46).

22. Lay figure on lap again. Release thumbs and indexes. Pass right thumb down into what was left thumb loop, the right index down into what was the right thumb loop, the left thumb down into what was the left index loop and the left index down into what was the right index loop. Pass thumbs and indexes under intervening strings to center, up center of figure and extend.

This makes *uwene* A. (See fig. 29, *g*.)

The Maoris make *uwene* from *piko o Kahoalii* (fig. 29, *e*) in the same way and call it *tane* (man) (1, vol. 3, p. 146; 2, p. 21); in Central Africa it is "the moon gone dark" (12, p. 32; 6, p. 129).

The last two figures are sometimes made with a second player, who takes the string off the hands of the first.

# HAWAII

1. Use doubled string or short string. Hold string on left thumb, and right thumb and index. Pass left index between right thumb and index on distal side of the dorsal right thumb-right index string and with ball of left index pull this string toward left; turn left index away and up and extend.

2. Pass little fingers from proximal side into index loop and pull down radial index string on palms.

3. Pass thumbs into index loops from proximal side and separate thumbs and indexes.

4. Holding little fingers firmly on palms, put middle fingers over index and thumb strings, and hold them on palms.

Bring hands near each other and pass right thumb under the string that passes back of left thumb and index and lift it on back of right thumb.

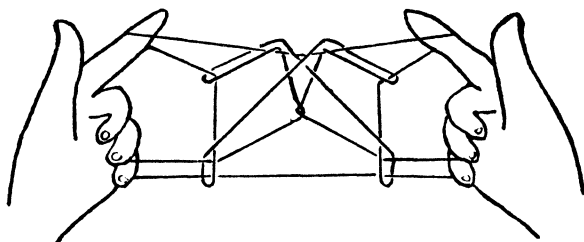


FIGURE 30.—String figure, "Hawaii," made on Oahu.

Release left thumb from this string and pass left thumb over it and under the string that passes back of right thumb and index, picking up this latter string and taking it off right thumb.

Draw hands apart, releasing indexes and middle fingers.

5. There are two loops over the little fingers strings. Pass each index finger between the strings of the nearest one and with back of index pick up that string of the loop that is a distal thumb string.

6. Put middle fingers over thumb strings and hold down on palms. Bring hands near each other. Pass right thumb under the string that passes back of left thumb and index and lift it on back of right thumb. Release left thumb from this string and then pass left thumb over it and under the

string that passes back of right thumb and index, picking up this string and taking it off right thumb.

7. With thumbs pick up radial index string. Release indexes and middle fingers and extend.

8. With middle fingers hold down ulnar thumb string. Pass index fingers from distal side into thumb loops, then proximal to the two distal radial thumb strings, then around the proximal radial thumb string, the straight string from thumb to thumb, and back to position, thus picking it up. Release thumbs and middle fingers and extend. (See fig. 30.)

#### HAWAII NUI A, OR KA LAU A KALEIKINI

Hawaii Nui A tells the story of the wreck of a happy home, using ancient symbols, now obscure, taken mainly from a chant of Lono-i-ka-makahiki (7, vol. 4, pp. 287, 305). The home is pictured as a house, and the symbols include islands, places, and the structure of the house.

1. String on left thumb, and right thumb and index. Pass left index between right thumb and index on distal side of the string that passes back of right thumb and index and with ball of left index pull this string toward left, turning left index away and up. Extend.

2. Pass little fingers from proximal side into index loops and hook down on palms the radial index string.

3. Put thumbs into index loops from proximal side and separate thumbs and indexes.

4. Holding little fingers tight on palms, put ring and middle fingers over index and thumb strings and hold them on palms. Bring hands near each other. Pass right thumb under string passing back of left thumb and index and lift it on back of right thumb. Release left thumb from this string and pass left thumb over it and under the string passing back of right thumb and index, picking up this string and taking it off right thumb. Draw hands apart, releasing index, middle and ring fingers.

5. Two strings run from each thumb to the neighborhood of the little finger of the same hand. Pass each index between the two strings nearest it, toward the center of the figure and with ball of index pick up and pull back between these strings the string that runs from the nearest thumb to the little finger of the other hand. (Middle fingers may be used to assist indexes in this movement.) Substitute ring fingers for index fingers and hold ring and little fingers close to palms.

6. With back of each index pick up the string that runs from nearest thumb to the radial little finger string and is not, back of thumbs, a straight string from thumb to thumb.

7. Put middle fingers over radial thumb string and hold it down on



palms. Bring hands near each other. Pass right thumb under string that runs back of left thumb and index and lift it on back of right thumb. Release left thumb from this string and pass left thumb over it and under the string that passes back of right thumb and index, picking up this string and taking it off right thumb.

8. With back of thumbs pick up radial index string. Release index and middle fingers and draw hands apart.

9. With middle fingers hold down ulnar thumb string. Pass indexes from distal side into thumb loops, then proximal to the two radial thumb strings that do not run straight from thumb to thumb, then toward body on

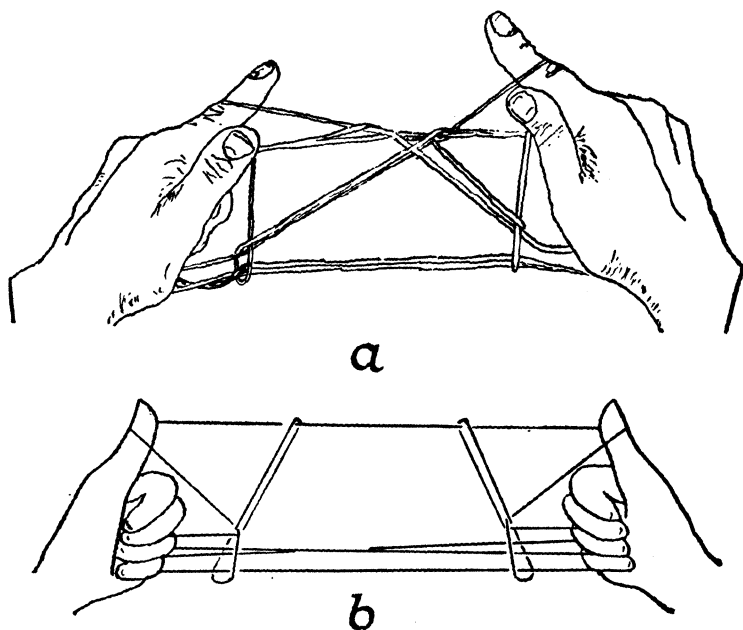


FIGURE 31.—String figures: *a*, "Hawaii nui" (great Hawaii), made on Hawaii and Kauai; *b*, *e ku i Halawa ka pou* (the post stood in Halawa), a continuation of *a*.

ulnar side of the radial thumb string that does run straight from thumb to thumb, then down and back around this string, picking it up and drawing it back through thumb loops. Release thumbs and middle fingers and extend. (See fig. 31, *a*.)

Hawaii nui a Kane;  
O Hilo a Kane a kapu.

O Hilo, aina o Keawe.  
Kua-i-lehua e noho mai la.

Great Hawaii, offspring of Kane  
O Hilo, of sacred Kane (loved one of  
god Kane)  
O Hilo, land (loved spouse) of Keawe,  
Who lives there, cutting lehua (conqueror  
of beautiful women).

10. Put thumbs outward into the two side triangles of the figure on ulnar side of the two horizontal loops. Release indexes and extend. (See fig. 31, b.)

This figure, a house with no gable, represents the unhappy home.

E ku i Halawa ka pou,	The post stood in Halawa (My man was estranged)
I ka ulu o Pele a peu e.	In the grove of Pele it thrust up (He went with other women)
He kuolo upena o Lanai.	A drag net is Lanai (He won other sweethearts)
He aha Molokini.	A coconut cord, Molokini (And bound them to him).
Kauhale lewa Wailua.	An unstable village, Wailua. (Married life is uncertain)
Ka-lua-nui.	<i>Ka-lua-nui</i> (Very stormy—Kaluanui was famous for high winds).

In the figure the lower strings represent the net, Lanai, and the strings about the central opening, Molokini.

11. Release ring fingers and extend.

This is the same figure as *hale-kumu-ka-aha* (p. 37). (See fig. 16.) Again there is a happy home. The two strings which mend the roof broken in the preceding figure here are likened to two hills of Kohala that travel together.

Kaluanui, Kaluanui	It may be stormy, stormy,
Ke ku ala Kohala	There stands Kohala.
O Pili, o Ka-la-hiki-ola	Pili and Kalahikiola,
Na puu haele lua.	The hills that travel together (that is, man and wife travel the path of life together, in harmony).

The hills referred to are two in Kohala that to the traveler seem to travel with him.

12. Put indexes from distal side into thumb loops and release thumbs. Pass each thumb toward center of figure between the nearest pair of strings that run from gable to sides of house and pick up on its back the one of the pair that runs from center of radial index string to radial side of little fingers. Release indexes.

13. Put indexes from distal side into thumb loops and release thumbs. This stage is called *pou* (post) in Culin's plates (18, p. 372, fig. 847).

14. On far (distal) side of figure is a string that runs straight across figure. Pick up this string with backs of thumbs (on palmar side of ulnar index strings, not between ulnar index strings) and pull it toward body through index loops.

15. Release indexes. Substitute indexes for thumbs and extend.

This makes the familiar *papio-maka-nui*. (See fig. 7.) It is considered a proof of skill to reduce a complicated figure to this.

Kaleikini was a chief of Kona, Hawaii, who, with *kauwila* wood, stopped up holes in the rocky seacoast so that spray from the sea would not come through and injure crops. To make the figure *ka laau a Kaleikini* make movements 1-9 of Hawaii Nui (fig. 31, a).

10a. Take a twig long enough to reach from top to bottom of the figure. Fasten one end of it with a clove hitch to the middle of the ulnar little finger string and insert the other end into the upper part of the figure between the radial index string and the four crossed strings just below it.

#### HAWAII NUI B

Like the other figure of this name (p. 64), this figure refers to an inharmonious home and draws on the same chant (7, vol. 4, pp. 287, 305) for some of its metaphors. This figure is made on Hawaii.

1. String on left thumb, and right thumb, and index. Pass left index between right thumb and index on distal side of the string that passes back of right thumb and index, and with ball of left index pull this string toward the left. Turn left index away and up and extend.

2. Thumbs pick up radial index string. Release left index.

3. Repeat movement 1.

4. Put little fingers from proximal side into index loops and pull down radial index string on palms.

5. Pass thumbs from proximal side into index loops and extend.

6. With middle fingers hold down the strings between the hands. Bring hands near each other, thumbs pointing toward each other. Pass right thumb to the left under the string that passes back of left thumb and index and pick it up, releasing left thumb from this string. Pass left thumb toward the right over the string that passes over back of left index and back of right thumb and under the string that passes over backs of right index and right thumb and lift up this string and draw it off of right thumb. Release middle fingers and extend.

7. Pass ring fingers proximal to index loops and hold down on palms the proximal ulnar thumb string, the one that is not a straight string from thumb to thumb. Pass middle fingers proximal to index loops, then from proximal side into thumb loops, then distal to the radial thumb string that is not a straight string from thumb to thumb, and with middle fingers pull this string back and hold it on palmar side of the strings held by the ring fingers. Release ring fingers, and then substitute them for middle fingers, and with them hold on palms the string formerly held by the middle fingers. Release indexes.

8. There are two loops from the thumbs around the little finger strings. With back of indexes pick up the distal (from standpoint of thumbs) string of each loop nearest to the index that picks it up.

9. Repeat movement 6 down to release of middle fingers. Pass thumbs from proximal side into index loops. Release indexes and middle fingers and extend.

10. Middle fingers hold down all ulnar thumb strings. Pass indexes from distal side into thumb loops; with their backs push in ulnar direction the two thumb strings that are not straight strings from thumb to thumb, then pass indexes around the two thumb strings that do go straight from thumb to thumb, pick up these strings and carry them back as indexes, return to position. Release thumbs and middle fingers and extend.

See figure 28, *Wailua Nui o Lanai* (p. 59), which is the same as this, though made somewhat differently and having a different chant.

Hawaii Nui a Kane, o Hilo a Kane, o ke  
kapu;

Aloha wale o Kalalea ma e noho mai la.  
Hikauhi ka pou i Halawa

Ke o'a i ka ulu a Pele a peu e.

Great Hawaii, offspring of Kane, O Hilo  
of Kane, the sacred.

Loved by those now angry who live there.  
Useless the leaning post (My husband is  
estranged)

The timber that thrusts up in the grove  
of Pele. (He went with other  
women.)

11. Hold figure so that the two radial index strings will be the top and the ulnar little finger string the bottom. From the center of the top strings of the figure strings extend to each side of the figure, where they form loops around the two ulnar index strings. Pass the thumbs outward into the figure just below these loops. Release indexes.

12. Indexes pick up distal ulnar thumb string.

Figure 29, *b*, of *Wailua Nui a Lanai* (p. 62), is identical.

O Kaluanui, ka makani kuehu lepo.

O Kau, aina makani iluna lele ka lepo.

I ka makani Waikaloea hihi mauka o  
Kaupea.

O Kaluanui na hale loulou a Kane iako.

O Kaluanui, whose wind stirs the dust.

O Kau, land of high wind that makes  
the dust fly.

The Waikaloea wind thick with dust in  
the upland thickets of Kaupea.

O Kaluanui where the palm thatched  
houses of Kane are set up.

The first three lines refer to matrimonial storms; the palm thatched houses are the wives of Kane, and the thatching typifies comfort and harmony.

13. Release ring fingers and extend.

Figure 29, *c*, of *Wailua Nui a Lanai* is identical.

A kukulu a paa i ka makani Waiopua.

That were built to stand firm in the  
Waiopua wind.

In a chant in the story of Pamano (7, vol. 5, pt. 2, p. 310) the Waikoloa wind is said to be a cold one, withering the branches in the upland of Waiopua.

The Kau winds are famous for raising the dust. See chant of *Ku e hoopio* (p. 16).

## KINIKUAPUU A

Kini, the hunchback, with aid of two hunchback demigods, Ieiea and Poopalu, fishermen of the god Makalii and protectors of Kini, stole the bananas of Kahuoi, a legendary field located variously on Hawaii, Maui, and Kauai (7, vol. 5, pt. 3, pp. 600-1).

1. String on right thumb and index, and on left thumb. Pass left index toward right distal to the dorsal right thumb-index string; pick up this string with ball of left index, pull it to the left and turn left index away and up.

2. Pass little fingers from proximal side into index loops and hook down radial index string on palms.

3. Pass thumbs from proximal side into index loops and extend.

4. With middle fingers hold down the strings between the hands. Bring hands together, thumbs pointing toward each other. Pass right thumb to left under the dorsal left thumb-index string and pick it up, releasing left left thumb. Pass left thumb toward the right over the string that passes over backs of left index and right thumb and under the dorsal right-thumb-index string and lift up this string and draw it off of right thumb. Release middle fingers and extend.

5. Navaho thumbs. (See fig. 32, *a*.)

This forms Kinikuapuu A (Kini-the-hunchback). The loop in center of figure is his head. The hunch is at the juncture of this loop with the radial little finger and radial thumb strings and below this hunch his legs spread apart.

"O Kini-kua-puu, ka mea nana i ai ka e'a  
maia a Kahuoi."

"Ua ai la ho'i au i kau e'a maia.

Ai piliwale, ai holea.

I ka hikina a'e a ka la a pumehana.

O Ieiea, O Poo-palu, na lawaia a Ma-  
kalii,

E kaka ana i ke aho loa."

"Hunchback Kini, you're the one who ate  
the bananas of Kahuoi."

"To be sure I have eaten your bananas,  
Poor eating, but abundant

It was pleasantly warm at sunrise.

O Ieiea, O Poopalu, the fishers of  
Makalii,

With their long fishline, ten hooks on a  
line."

The meaning is: "Two gods back me and I'll eat all the bananas I choose." Makalii was a god who lived on earth and in the Pleiades. The name Ieiea

may be translated "barb of a hook"; Poopalu means "fishhead used for bait"; and Makalii means "small mesh of a net." The *kaka* was a fishline used in deep sea fishing on which was fastened ten or fifteen hooks. A *piliwale* is one who attaches himself to another for sake of a living, which is naturally poor.

A version of this chant (7, vol. 6, pt. 1, p. 215) adds the line:

Kuukuu kaula, ohi wale ka wahine.

The line was cast but the wife got the fish.

(That is,  
"You planted the bananas but I ate them.")

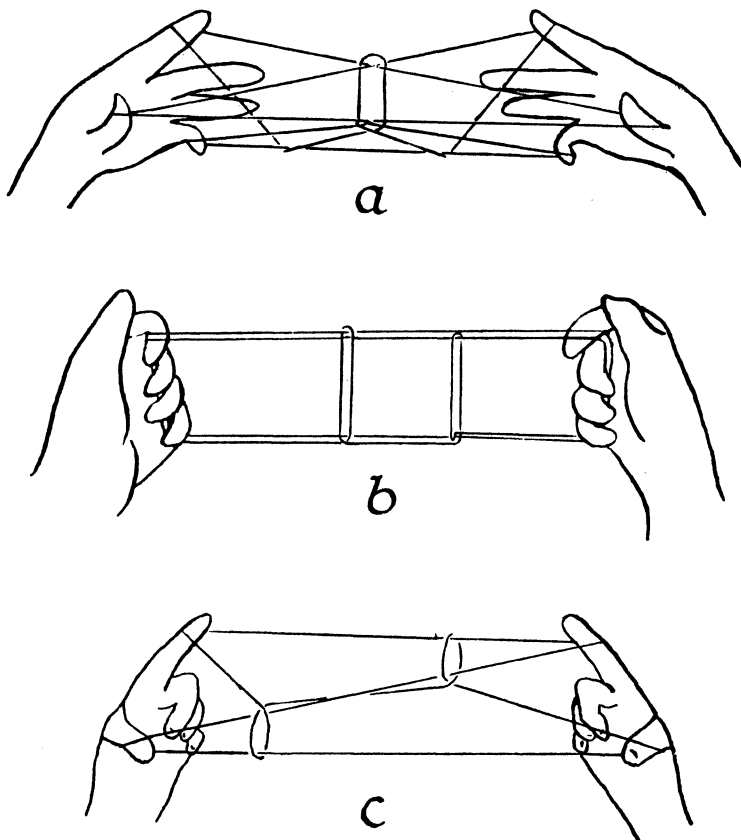


FIGURE 32.—String figures: *a*, "Kinikuapuu" A (Kini the hunchback), made on all Hawaiian islands; *b*, *na keiki pii niu* (youngsters who climbed for coconuts), a continuation of *a*; *c*, *na keiki koho paoo* (youngsters who dug for potatoes), a continuation of *a*.

6. Turning hands outward, lay the figure of Kinikuapuu on lap, his head pointing outward, his legs inward. With right thumb and index pick up

(to right of hunch of Kinikuapuu) the strings that pass through the hunch—that is, those which were the right radial thumb string and the right radial little finger string—the right index passing from above into the former right thumb loop and the right thumb passing from above down between the said two strings and the right leg of Kinikuapuu. At same time with left thumb and index pick up (to left of hunch) the strings that were the radial left thumb string and the radial left little finger string, putting the left index from above into the former left thumb loop and putting the left thumb down between the above named two strings and the left leg of Kinikuapuu.

7. After picking up the figure from lap, pass middle, ring, and little fingers from far (distal) side into index loops, withdraw thumbs and extend the figure, drawing hands apart and holding indexes up and little fingers down. (See fig. 32, b.)

This makes *na keiki pii niu* (the youngsters who climbed after coconuts).

Na keiki pii niu.

The youngsters were climbing for coconuts.

"He niu loa wale la ho'i ia oe."

"You can't get this coconut."

"Ka omali."

"It's a very poor one."

"He omali loa wale la ho'i ia, ia oe."

"Well, you can't get even a very poor one."

8. Pass thumbs and indexes from below between the two radial index strings. Release all other fingers and extend on thumbs and indexes. Be careful in passing the thumbs and indexes between the two radial index strings that it is done so that in the subsequent extension the loops will not interfere; that the loop held by the thumbs may be held toward the body flat, without interference by that held by the indexes and vice versa.

This makes *na keiki koho paoo* (the youngsters who dug for big potatoes). (See fig. 32, c.) The loops representing the youngsters that in preceding figure were upright, are now horizontal, a different posture, appropriate to the changed employment.

Na keiki koho paoo.

The youngsters were digging for large potatoes.

"Paoo loa wale la ho'i ia oe."

"You can't get this big potato."

"Ka ohulu."

"It's a little, second class one."

"He ohulu loa wale la ho'i ia, ia oe."

"Well, you can't get even a little second class one."

The pictures in the last two figures are of a boy and girl who have been climbing trees for coconuts and digging for potatoes. They are resting, perhaps, and the girl playfully refers to herself as a coconut or potato that the boy cannot get, and he retaliates by saying she is not worth having anyway. The girl retorts that he is too worthless to win a poor coconut or a second rate potato.

The *paoo* are the first large potatoes obtained when the vines are first dug up; the *ohulu* are small ones of a secondary crop. The youngsters gathered these potatoes at a hill named Bones of Pele, at Hana. (See 7, vol 5, pt. 3, pp. 508-9.)

### KINIKUAPUU B, OR PALILA A

The same chants are used with this figure of Kinikuapuu as with the preceding one.

Palila was a Kauai warrior. At one time he lived with his boy Puana and old nurse Lupea in the forest, eating gum of the kukui tree and wild bananas (7, vol. 6, pt. 3, p. 388).

1. Opening A.

2. Pass left thumb from distal side into left index loop, pick up radial little finger string and bring it back through index loop.

3. Pass right thumb proximal to index loop, pick up radial little finger string and bring it back proximal to index loop.

Movements 2 and 3 are made simultaneously.

4. Pass little fingers distal side of index loops and pick up ulnar thumb string. Release thumbs.

5. Pass thumbs distal side of index strings and pick up distal radial little finger string.

6. Release little fingers. Do not draw tight. Pass right little finger proximal to index strings and pull down ulnar right thumb string on palm. At same time pass left little finger from proximal side into left index loop and pull down radial left index string on palm.

7. Twist right index inward over radial index string, down, outward and up. Twist left index inward from distal side into left thumb loop, away and up.

8. With right middle finger pull down on palm the ulnar right index string, and at same time with left middle finger pull down on palm the string that runs from the left thumb-index string toward center of figure. (See fig. 33, a.)

O Palila, O Puana, ka hanai a Lupea  
Makua a keiki i ka nahelehele,  
Pilali ka ai a kuu hanauna,

Hoolau-makani o Hilo na hoa ai mai'a o  
Palila.

O Palila, O Puana, the ward of Lupea.  
Parent and child in the wilderness.  
My descendants shall feed on the gum of  
trees,

Hoolau wind of Hilo, the banana eating  
kin of Palila.

9. With thumbs pick up radial index string. Release indexes.

10. Pass indexes toward body, proximal to the distal radial thumb string and distal to the proximal radial thumb string, around this string and back,



picking up thus the proximal radial thumb string. Release this string from the thumbs by letting the distal thumb string fall outside of (toward body) and below it and slipping the string picked up by the indexes inside the other thumb string (outward) and off the thumbs.

Extend, holding indexes high and pointing up, thumbs pointing toward body and rather low, little fingers low. (See fig. 33, *b*.)

Kahi i kau ai ka malo o Pua-ula.

Where was hung the red flower loin cloth.

The red flower loin cloth, made of red tapa, particularly fine, was only to be worn by chiefs. The nurse Lupea became a hau tree, and wherever the

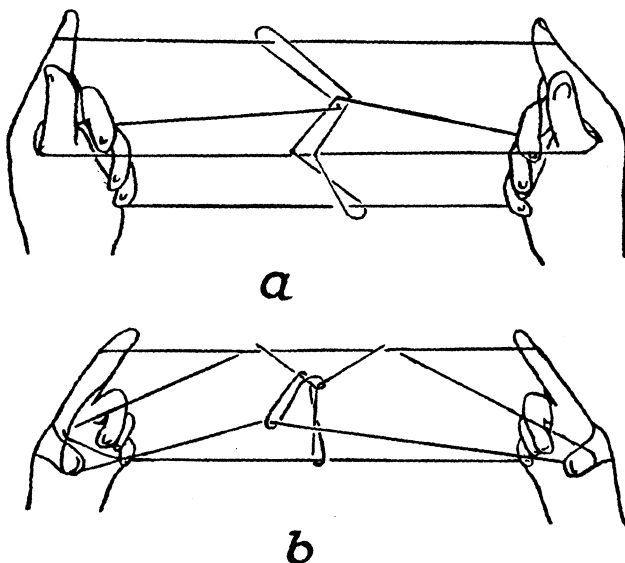


FIGURE 33.—String figures: *a*, “Kinikuapuu” B (Kini-the-hunchback), made on Hawaii, Oahu and Niihau; (termed also “Palila,” on Niihau); *b*, *na keiki pii niu* (youngsters who climbed for coconuts); on Niihau, *malo o pua-ula* (red-flower loin cloth), a continuation of *a*.

malo of Palila was spread out to dry, no hau tree grew (7, vol. 5, pt. 1, p. 148).

When the first figure is called Kinikuapua, this second is called variously “the fisherman of Makalii,” “the youngsters who climbed for coconuts,” or “the youngsters who dug for big potatoes.”

#### POLA AI

1. Hold string on right thumb and index, and left thumb. Pass left index between right thumb and index, over and past the dorsal right thumb-

right index string, pick up this string with ball of left index, pull it to the left and turn left index away and up.

2. Pass thumbs distal side of radial index string and pick up ulnar index string.

3. Pass little fingers distal side of radial index string and pick up ulnar thumb string. Release thumbs.

4. Pass thumbs distal side of index strings and pick up radial little finger string.

5. Opening A.

6. Pass thumbs distal side of intervening strings and pick up radial little finger string.

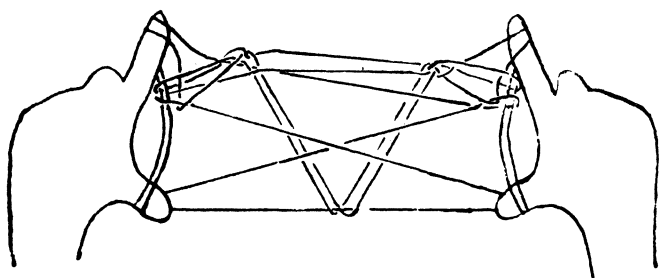


FIGURE 34.—String figure, *pola ai* (poi bowl), made on Oahu.

7. Pass little fingers distal side of intervening strings and pick up ulnar thumb string.

8. Pass each index over the two palmar strings of its hand, hook them toward the palm and then pass index from distal side into its own loop close to itself. The help of the opposite index or middle finger in pulling out the cross in each index loop near the index, will be necessary to accomplish this movement.

9. Release little fingers and extend, stretching indexes away proximal to all strings and up. (See fig. 34.)

#### TUU TAMAHINE, KA HAU KOLOLIO, AND KAUIKI

1. Hold string on left thumb and index and right thumb. Pass right index proximal to and pick up on back of right index the string that passes back of left thumb and index.

2. Pass little fingers from proximal side into index loops and pull down radial index string on palms.

3. Bring indexes together and pass right index from distal side into left index loop. Release left index leaving left index loop as a proximal

right index loop. Pass left index from distal side into right index loop and pick up the distal right index loop and take it off of right index. Thus the two index loops have been exchanged.

4. Pass thumbs from proximal side into index loops. Release indexes.

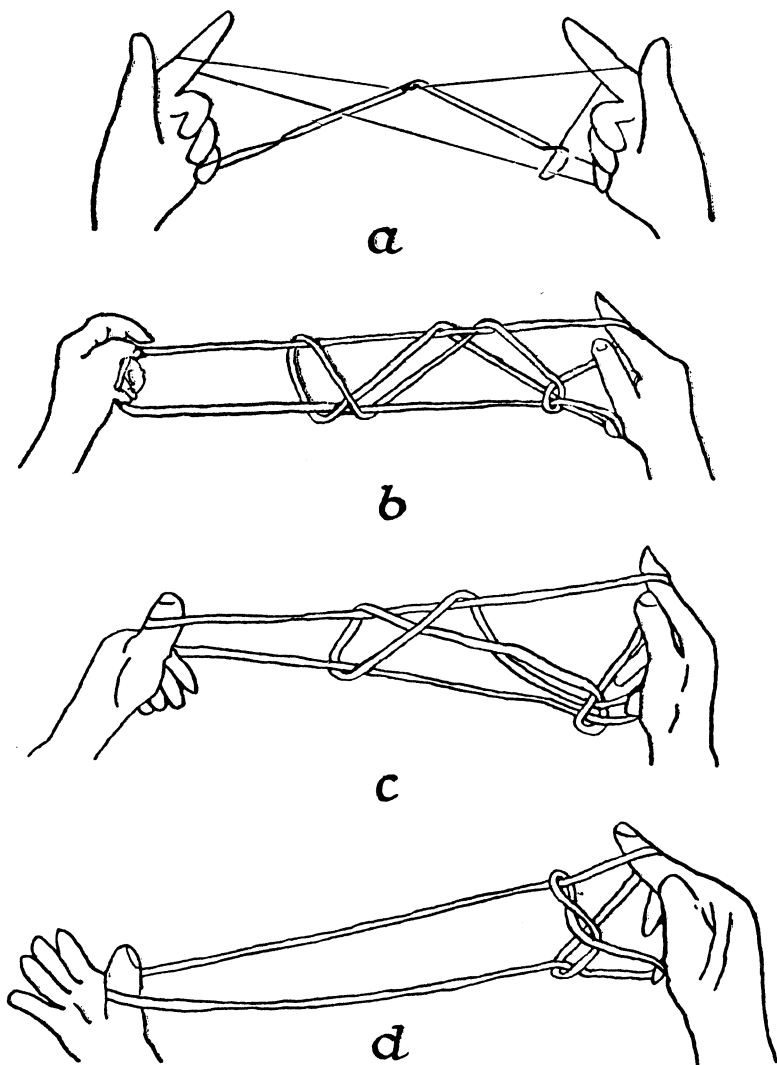


FIGURE 35.—String figures: *a*, *kauiki*, made on Hawaii and Kauai; *b*, *tuu tamahine* (my daughter), on Niihau; *ka hau koholio* (land breeze of Kona), on Hawaii, a continuation of *a*; *c*, *alualu atu* (I went hunting), a continuation of *a*, made on Niihau; *d*, *pali o Ke-E* (cliff Ke-e), a continuation of *a*, made on Kauai.

5. Pass indexes from distal side into thumb loops, then proximal to the distal radial thumb string and distal to the proximal radial thumb string (the straight string from thumb to thumb), down and back, taking this string back through the thumb loops. Release thumbs.

This makes *kauiki* (fig. 35, *a*).

The chant is from Kona, Hawaii:

He aloha kauiki, ukaka;  
Ka puka o kou hale, ukeke;  
I ka hole mau ia, ukaka;

I love you little canoe, strum, strum;  
The door of your house, tum, tum;  
With the constant rammering, strum,  
strum;

I ka ihu elepani, ukeke.

By the elephant's trunk, tum, tum.

The *ukeke* was an ancient mouth musical instrument, something like a jew's harp.

6. Lay figure on lap, proximal side up. Keep right index and little finger in their loops but withdraw fingers of left hand. The proximal side of the left index loop will be up, and the distal side of the left little finger loop will be up. Put the left index down through the former left little finger loop and draw the former left index loop up through it. Lift figure off lap and extend.

This makes the Kona, Hawaii, figure *ka hau Kololio* (land breeze of Kona) and the Niihau figure *tuu tamahine* (my daughter). (See fig. 35, *b*.)

Tuu tamahine, tuu tamahine,  
Hele i ta ule i ta mea lealea.  
Ho'i mai no la u-to.

My daughter, my daughter,  
Went wantoning.  
Came back with swelling breast.

7. Substitute little finger for left index. Put left thumb into left little finger loop near its radial string to the right of the nearest loop around the radial left little finger string. Release left little finger and extend. (See fig. 35, *c*.)

Alualu atu i ta hope o teiti;  
A noho i ta hale Tua Poulu;

I went hunting for the children;  
They were staying in the Kua Poulu  
house;

Manao atu ho'i e loa ana ilaila.

Just where I thought to find them.

8. Substitute left little finger for left thumb. Put left thumb into left little finger loop to the right of the nearest loop around it. Release left little finger and extend. (See fig. 35, *d*.)

E noho ana i ta pali o Te-E.

They were living on the cliff, *Ke-E*.

9. Release right little finger. There will be nothing left of the figure but twisted strings. Put all four fingers of each hand toward you through each loop. Hold taut and turn hands, half on their backs, then back again while chanting:

Haule laua i Tuami.

They camped at Kuami.

HONU, METHOD NO. 1

1. Opening A.
2. Thumbs pick up radial index string.
3. Little fingers pick up ulnar index string.
4. Navaho thumbs and little fingers.
5. Pass thumbs under and pick up the straight string that runs from radial little finger string of one hand to radial little finger string of the other hand.
6. Pass little fingers under and pick up the straight string that runs from ulnar thumb string of one hand to the ulnar thumb string of the other.
7. Navaho thumbs and little fingers. (See fig. 36.)

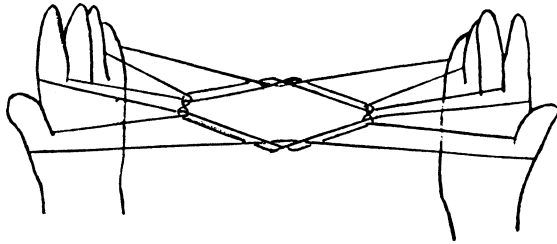


FIGURE 36.—String figure, *honu* (turtle), made on Maui and Kauai.

Say any one of these chants:

O honu nui maeaea  
Mai Kahiki mai ka hele ana mai,  
O Kahiki ula.

Honu iki, po'o ku'eku'e,  
Hele i kai o Kape'a.  
Ku ka la i kou aina.  
Kela kau wa, honu iki. Puha.

Honu pe'e kua he,  
Ka o ke kai-hala he,  
Ka hale ku pia he.

Oh, turtle big and powerful  
Come from Kahiki here  
Oh red Kahiki.

Little turtle with bony head,  
Go to Kapea Sea.  
The sun is high o'er your land,  
That's your time, little turtle, Blow.  
(Figuratively "Lover, hie to your  
Sweetheart. Now's your time.")

Turtle, hiding in grave-shaped shell,  
Tossed by the noisy sea,  
In a house like a lumpy grave.

Puns are used in this chant. "*Peekua*" applied to a person means "stout," and a figurative translation would be "fat woman, tousled by many lovers."

Some persons think the word *he* a meaningless refrain—though it is not so used in modern chants—and would translate:

Fat turtle, *he*,  
Sea-tossed, *he*,  
Lumpy house, *he*.

## HONU, METHOD NO. 2

This figure, while not identical with that of method no. 1, is practically so.

1. Opening A.
  2. Pass ring fingers over intervening strings and pick up ulnar thumb string. Release thumbs.
  3. Pass thumbs proximal side of index and ring finger strings and pick up radial little finger string and return with it proximal to those strings to position.
  4. Pass thumbs distal side of index strings and pick up radial ring finger string.
  5. Navaho thumbs.
  6. Pass left thumb and index from distal side into right ring finger loop and take hold of and lift the radial right little finger string.
  7. Release right little finger, then pass it distal side of ulnar ring finger string and into its own loop again. Left thumb and index release right little finger loop.
  8. Pass right thumb and index from distal side into left ring finger loop and take hold of and lift the radial left little finger string.
  9. Release left little finger, then pass it distal side of ulnar ring finger string and into its own loop again. Right thumb and index release left little finger loop.
  10. Release ring fingers and extend.
- Use same chants as for method no. 1.

## PO, METHOD NO. 1

1. Opening A.
2. Pass thumbs from proximal side into index loop, over ulnar index string and then from proximal side into little finger loop and extend.
3. Pass little fingers distal side of ulnar index string and pick up ulnar thumb string. Release thumbs.

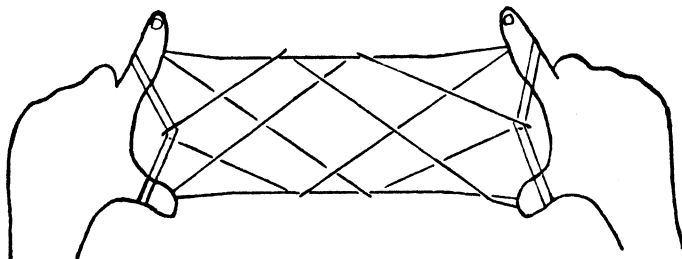


FIGURE 37.—String figure, *po* (night), made on all Hawaiian islands.

4. Pass thumbs distal side of index strings and pick up radial little finger strings.

5. Put indexes over palmar strings and from distal side into index loops. Release little fingers and extend, stretching indexes away under all strings and up up. (See fig. 37.)

It is now *po* (night) and seven stars appear.

E po e, e po e,  
Kau mai ka hoku.

At night, at night,  
The stars overhang us.

6. Hook down with little fingers the strings that pass from the side strings of the figure to the radial thumb string. Release indexes and say:

A ao a'e la  
Helelei wale iho no

At dawn  
They are gone.

7. Pass indexes from proximal side into little finger loop and pick up radial little finger string on balls of indexes. Then pass indexes from distal side into thumb loop and around the ulnar thumb strings. Release little fingers and extend.

It is night again and the stars reappear.

In place of movements 6 and 7 the following may be used:

8. Bend indexes toward center of figure and, turning them in a proximal direction, pick up the nearest string that crosses each index. The former index loops slip off and the stars vanish.

9. Pass little fingers from proximal side into index loops and pull down on palms the radial index strings.

Pass indexes from distal side into thumb loops, away (in ulnar direction) and up. Release little fingers, extend and stars reappear.

## PO, METHOD NO. 2

Made on Kauai.

1. First position. Turn hands palms outward, thumbs close to former ulnar little finger string. Pass thumbs over this string, down, towards body under both strings and up, at same time bringing hands back to a position with palms facing each other.

2. Opening A.

3. Thumbs pick up radial little finger string.

4. Little fingers pick up ulnar thumb string.

5. Pass thumbs from proximal side into index loops close to indexes.

6. Navaho thumb loops.

7. Pass indexes from distal side into the small triangles near thumbs made by double strings, then away under all strings and up, releasing little fingers.

8. Each little finger hooks down on palm the double string that crosses the thumb loop of its hand. Release thumbs.

To make stars disappear transfer little finger loops to thumbs and proceed as in method no. 1.

### WAIU OLEWA B

The figure *waiu olewa* B (pendulous breasts), or *waiu o Lewa* (breasts of Lewa), is made on Oahu.

*Waiu o Lewa* is the name of two hills near Kahuku, Oahu.

1. Make six movements of *po*, method no. 1 (p. 78).
2. Release little fingers and let the loops hang down.

### HOKU A, SPIDER, OR KOHE EKEMU

1. Make the figure *po*, method no. 1 (p. 78).
2. Release right thumb and insert it in right index loop from proximal side. Release right index and insert all fingers of right hand from distal side into right thumb loop and release right thumb. Do not draw strings taut.
3. Release left index and insert all four fingers of left hand from proximal side into left thumb loop and release left thumb.
4. Extend, holding indexes and little fingers far apart, indexes high, little fingers low. By moving indexes alternately to right and left, the central loop may be made to open and shut. (See fig. 38.)

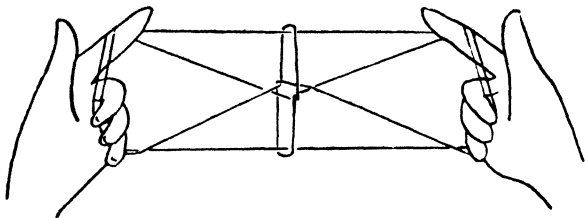


FIGURE 38.—String figure, *hoku* (star), "spider," or *kohe ekemu* (embrace me), a continuation of *po*, made on all Hawaiian islands.

Kohe ekemu, kohe ekemu, e hoi i ka hale  
la pili.

Hele kuu kane i kahakai, lawaia, ho'i  
mai aole i'a.

Hele i kuu kohe, hele i kuu kohe.

I uka, i kai, kana nuu.

Kole ko puka kukini, kana nuu.

Hele i ka huaka'i, hele a ho'i mai.

Embrace me, embrace me, return to the  
nuptial house.

My husband went to the shore to fish,  
returned with no fish.

Come, embrace me, come embrace me.

To the mountain, to the sea, proud one.

Red and eager, proud one.

He went on a journey; went there and  
back again.



Aohe i ole o ka lima.  
E pani au i ku'u kohe.  
E helei au i ku'u kohe.  
I uka, i kai, kana nuu.  
Kole ko puka kukini, kana nu'u.

Nothing, perhaps, in the hand.  
I shut myself from you.  
I invite you in.  
To the mountain, to the sea, proud one.  
Red and eager, proud one.

### WAIU OLEWA C

The figure *waiu olewa* C (pendulous breasts) was made in Honolulu.

1. Make *hoku* A.
2. Place figure on lap, little fingers inward, indexes away, and release all fingers from figure.
3. Put right thumb down into left near triangle and right index down into right near triangle and close thumb and index under the two strings between them.

Put left thumb down into left further triangle and left index down into right further triangle and close thumb and index together under the two strings between them.

4. Pick up and extend by drawing hands apart and separating thumb and index of each hand as much as possible. Draw tight.
5. Drop thumb loops and let them hang.

### THIRTEEN EYES

1. Make first four movements of *po* (p. 78).
2. Release little fingers and pass them on distal side of index strings and ulnar thumb strings and pick up the radial thumb strings.
3. Put indexes over palmar strings and from distal side into index loops. Release little fingers and extend, stretching indexes away under all the strings and up.

The strings that run from radial sides of the thumbs to the center of radial index string sometimes need to be pushed a little toward the sides of their respective thumbs to make the figure right, as they get too much bunched together at the radial index string juncture. (See fig. 39.)

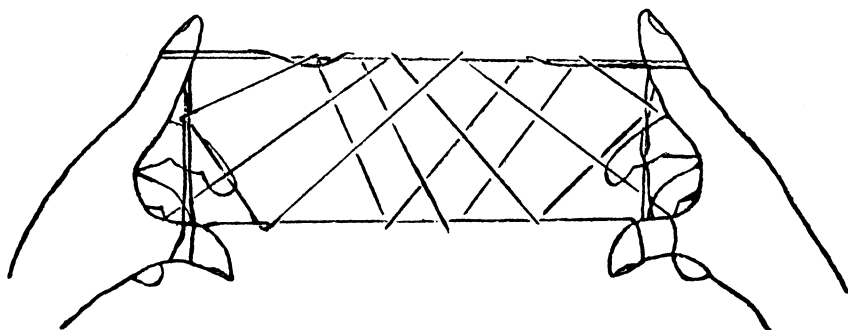


FIGURE 39.—String figure, "thirteen eyes," made in Honolulu.

## WAAWAA IKI NAAUPO A

1. Opening A.
2. Pass thumbs on distal side of index loop and pick up radial little finger string. Release little fingers.
3. Pass little fingers distal side of index strings and pick up the proximal ulnar thumb string (not the ulnar thumb string that runs straight from thumb to thumb).

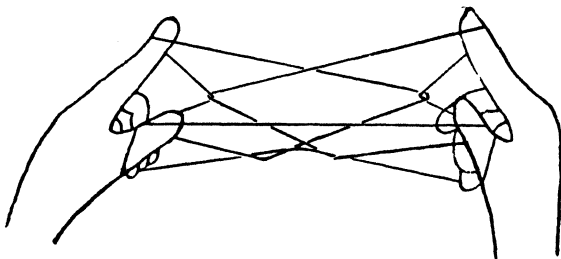


FIGURE 40.—String figure, *waawaa iki naaupo A* (stupid little fool), made on Hawaii.

4. Put indexes over palmar strings down into index loops. Release little fingers and extend, stretching indexes away and up.
5. Pass little fingers on proximal side of strings to ulnar thumb string then distal side of ulnar thumb string and pull it down on palms to form keel of a canoe.

"Makemake pii mai i ka wa'a hele hana  
pihi."

"Aole wa'a."

"I wish to get into the canoe to go to  
fish."

"There is no canoe."

When saying the last line let go little fingers and draw tight. The canoe disappears. (See fig. 40.)

## KALAHALE

1. Opening A.
2. Pass thumbs on distal side of index loop and pick up radial little finger string.

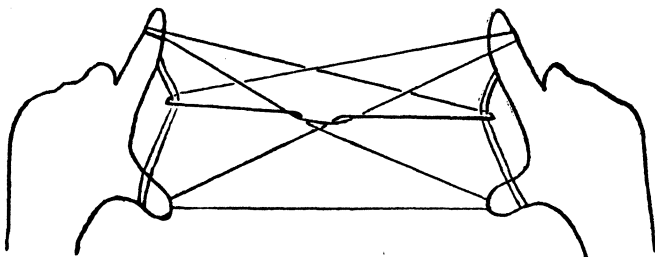


FIGURE 41.—String figure, *kalahale* (precipitous), made on Kauai.

3. Pass little fingers distal side of index loop and pick up ulnar thumb string.

4. Put index fingers over palmar strings down into index loop. Release little fingers and extend, turning index fingers away and up. (See fig. 41.)

#### OPEN THE GATE, PAUMA-WAI A, OR POHO PAAKAI

1. Opening A.
2. Pass thumbs on distal side of index loop and pick up radial little finger string.
3. Pass little fingers distal side of index loop and pick up ulnar thumb string.
4. Put index fingers over palmar strings down into index loop and hold

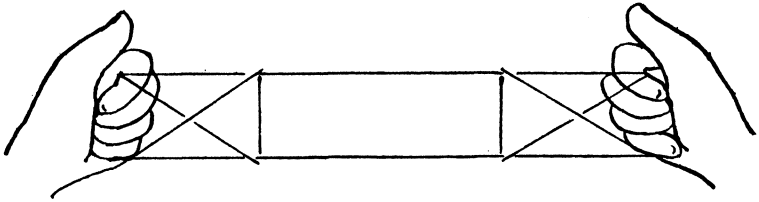


FIGURE 42.—String figure, "open the gate," *pauma-wai* (water pump), or *poho paakai* (salt hole), made on Hawaii, Oahu, and Kauai.

palmar strings on palms. Release all strings but those on indexes. Do not draw tight.

5. Turn indexes inward and up. Insert either thumbs or middle, ring and little fingers from proximal side into index loops and extend by separating thumbs and indexes or little fingers and indexes as widely as possible.

6. To make gate open pull hands apart slowly. (See fig. 42.)

This figure is made from other figures; in Fiji, as Undu and Koro (17, p. 41) and Koro and Wakaia (17, p. 42), and in Society Islands as Tahiti and Moorea (17, p. 84), representing two islands in each place.

#### SHUT THE GATE

1. Opening A.
2. Pass thumbs on proximal side of all strings; pick up ulnar little finger string on backs of thumbs and return with it to position. Release little fingers.
3. Pass little fingers distal side of index loop and pick up ulnar thumb strings.
4. Put indexes over palmar strings down into index loop and hold

palmar strings on palms. Release all strings but those on indexes. Do not draw tight.

5. Turn indexes toward body and up. Insert middle, ring and little

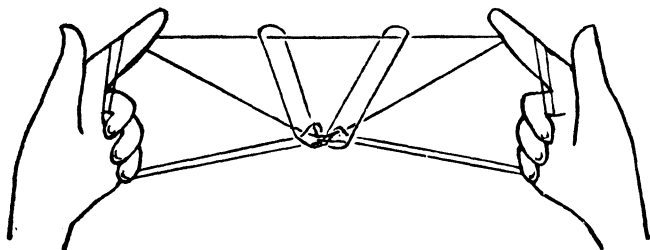


FIGURE 43.—String figure, "shut the gate," made on Oahu.

fingers from proximal side into index loops and extend by separating indexes and little fingers as widely as possible.

6. Pull little fingers apart slowly (by turning hands) until gate closes. (See fig. 43.)

## M

1. Opening A.
2. Pass thumbs on distal side of index loop and pick up radial little finger string.
3. Pass little fingers distal side of index loop and pick up ulnar thumb string.

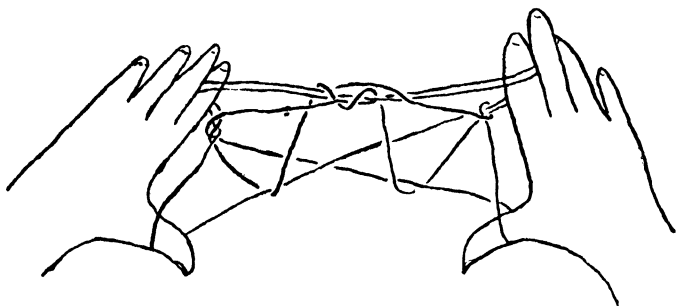


FIGURE 44.—String figure, "M," made on Kauai.

4. Pass thumbs from proximal side into index loops between index finger and palmar string.
5. Navaho thumbs.
6. Put indexes down from distal side into the small triangles near thumbs. Release little fingers and extend, stretching indexes away under all strings and up and turning palms away. (See fig. 44.)

## UAPŌ O WAILUKU

1. Opening A.
2. Pass thumbs on proximal side of all strings; pick up ulnar little finger string on backs of thumbs and return with it to position. Release little fingers.
3. Pass little fingers distal side of index loop and pick up ulnar thumb strings.
4. Put indexes over palmar strings down into index loop, release little fingers and turn indexes away on proximal side of all strings and up.

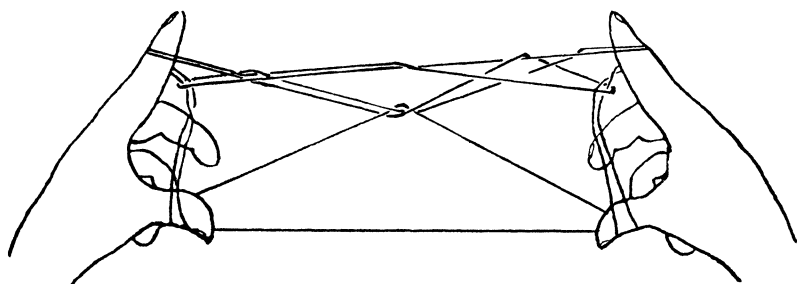


FIGURE 45.—String figure, *uapo o Wailuku* (Wailuku River bridge), made on Hawaii.

5. One radial thumb string has two strings from the neighborhood of indexes looped around it which pull it to center of figure. With middle fingers pull these two strings at the point of their junction until they are nearer body, and work the figure until a V with double sides appears. (See fig. 45.)

## KING'S PALACE AND SERVANT'S HOUSE

1. Opening A. Use a string slightly longer than usual.
2. Pass thumbs proximal side of index loops and from proximal side into little finger loops, around ulnar little finger string and back, thus picking up ulnar little finger string.
3. Pass thumbs distal side of radial index string and pick up ulnar index string. Release little fingers.
4. Pass little fingers distal side of index string and pick up ulnar thumb strings. Release thumbs.
5. Pass thumbs distal side of index loop and pick up radial little finger strings.
6. Pass indexes over palmar strings down into index loops. Release little fingers and extend, stretching indexes away, and up.

This makes the "king's palace" (figure 46, *a*), a guard on each side.

7. Release indexes. Place all fingers from proximal side into thumb loops; release thumbs and extend, stretching indexes and little fingers far apart.

This makes the "servant's house" (fig. 46, *b*), without guards.

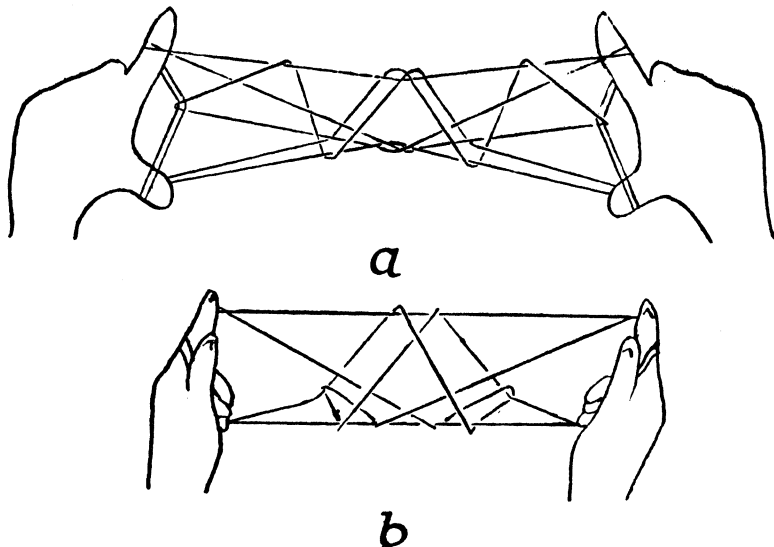


FIGURE 46.—String figures: *a*, "king's palace," made on Oahu; *b*, "servant's house," a continuation of *a*.

#### MOUNTAIN

1. Opening A.
2. Release thumbs, pass them proximal to all strings, pick up ulnar little finger string with their backs and bring it back under figure to position.

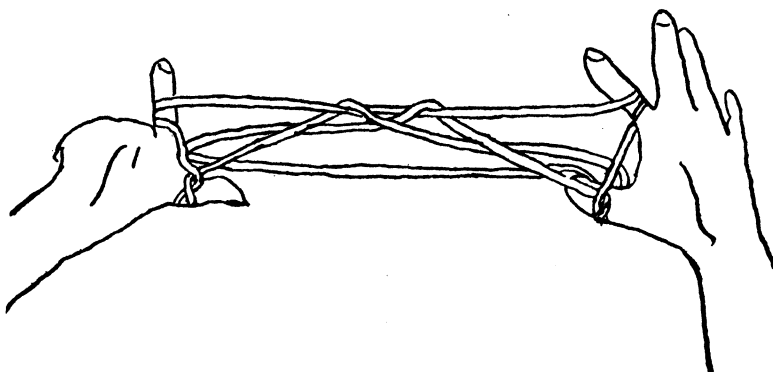


FIGURE 47.—String figure, "mountain," made on Kauai.

3. Pass thumbs distal side of radial index string and pick up ulnar index string. Release little fingers.

4. Pass indexes down into the wide triangles that lie along the radial index string, around the radial index string and up. Extend with indexes high and palms turned away. (See fig. 47.)

V

1. Opening A.

2. Release thumbs, pass them proximal to all strings, pick up ulnar little finger string with their backs and bring it back under figure to position.

3. Pass thumbs distal side of radial index string and pick up ulnar index string. Release little fingers.

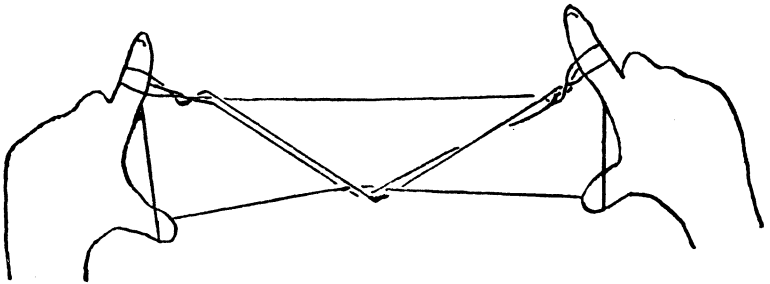


FIGURE 48.—String figure, "V," made on Kauai.

4. Pass little fingers distal side of index string and pick up ulnar thumb string. Release thumbs.

5. Pass thumbs distal side of index strings and pick up radial little finger string.

6. Pass indexes from distal side into thumb loops; release little fingers and extend, turning indexes away under strings and up; palms turned outward. (See fig. 48.)

HALE ALII

1. Opening A.

2. Release thumbs, pass them on proximal side of all strings, pick up ulnar little finger string with their backs and bring it back under figure.

3. Pass thumbs distal side of index strings and pick up radial little finger string. Release little fingers.

4. There are two loops around index strings. Pass right index from the right into the loop near the left index and with ball of right index pull slightly toward the right the lower string of this loop—the proximal

radial thumb string. This string now becomes a distal right index string. Pass the left little finger over intervening strings and from proximal side into this distal right index loop and pick it up, withdrawing right index. Similarly pass left index from the left into the loop near the right index and pick up with ball of left index the string of this loop that passing around right thumb is the proximal thumb string, and pull it slightly toward

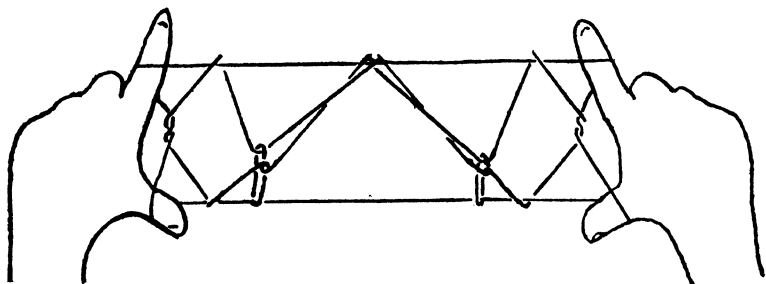


FIGURE 49.—String figure, *hale alii* (house of a chief), made on Oahu.

the left. It becomes the distal left index loop. Pass the right little finger from proximal side into this distal left index loop and pick it up, withdrawing left index. Release thumbs and extend.

5. Pass thumbs distal side of index strings and pick up radial little finger strings.

6. Pass thumbs from proximal side into index loops between each index and the palmar string of that hand.

7. Navaho thumbs.

8. Pass indexes from distal side into the triangles near thumbs, release little fingers and extend, turning indexes away and up. Palms turned away. (See fig. 49.)

## W

1. Opening A.

2. Release little fingers. Pass little fingers distal side of ulnar index string and pick up radial index string.

3. Thumbs pick up ulnar index string. Release little fingers.

4. Pass little fingers distal side of index string and pick up ulnar thumb string. Release thumbs.

5. Pass thumbs distal side of index strings and pick up radial little finger string.



6. Pass indexes from distal side into thumb loops. Release little fingers and extend, turning indexes away and up, and palms turned away. (See fig. 50.)

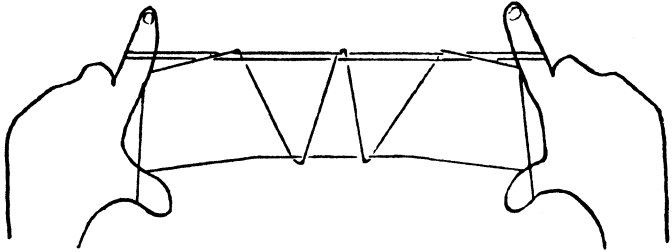


FIGURE 50.—String figure, "W," made on Kauai.

#### PAKII LEHUA

1. Opening A.
2. Pass indexes under and pick up radial little finger strings then turn and pick up ulnar thumb string. Release thumbs.
3. Pass thumbs from proximal side into index loops and extend.
4. Withdraw little fingers from their loop and insert again in same loop from distal side and hold loop with balls of fingers. Release indexes.

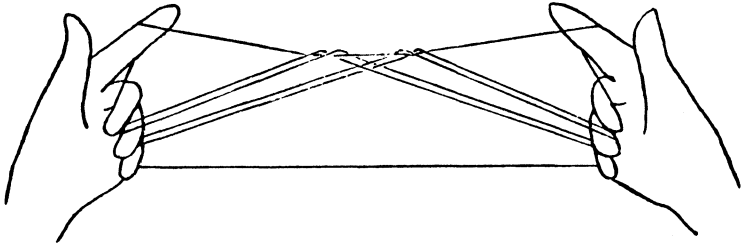


FIGURE 51.—String figure, *pakii lehua* (carved lehua platter), made on Niihau.

5. Pass ring fingers from distal side into thumb loops and hold down ulnar thumb strings.

6. Pass indexes from distal side into thumb loops, then proximal to the two proximal radial thumb strings and then distal to the distal radial thumb string (the straight string from thumb to thumb), around this and back, taking this string back through the thumb loops. Release thumbs. (See fig. 51.)

#### KUKUILAUANIA A, METHOD NO. 1, OR KANEMOA

Kukuilauania (Kukui-lau-ania) is a little highland on the island of Hawaii from which a view may be had across Hilo into Puna. In Puna were the sacred groves of kukui trees of Hiiaka, favorite sister of Pele, goddess

of the volcano, who sent Hiiaka to Kauai after her lover, Lohiau. On her return after a long trip full of adventure, fighting of dragons, and raising of Lohiau from the dead, Hiiaka, looking from Kukuilauania saw her precious kukui trees cooked red by the lava flow of Pele who had become impatient and angry. In the chant of the string figure Hiiaka, in metaphor, tells her horror at the sight, and her resolve that she will no longer regard Pele as a sister and serve her.

1. Opening A.
2. Twist thumb, index and little finger loops by passing each digit away, down, toward body under the loop, and up.
3. Pass thumbs from distal side into index loops, pick up radial little finger string and bring it back through index loops.

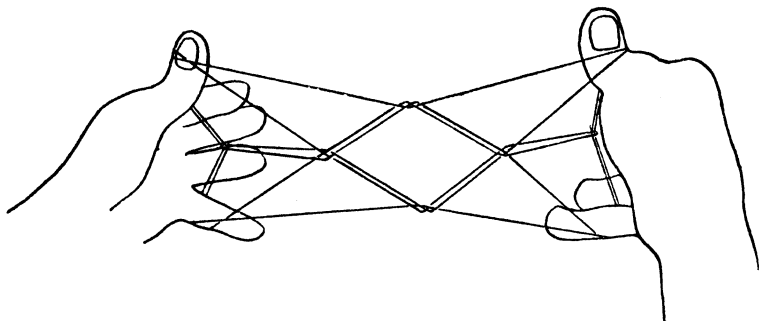


FIGURE 52.—String figure, Kukuilauania (kukui trees with scorched leaves), made on Hawaii, Oahu, and Niihau.

4. Pass little fingers and ring fingers from proximal side through index loop. Then little fingers pick up the ulnar thumb string and with help of ring fingers take it back through index loop.
5. Release indexes and extend. The central diamond generally needs to be worked a little and enlarged to make figure appear well. This can be done with the indexes. (See fig. 52.)

Kukui-lau-ania au i Hilo  
Nana aku ia Waiakea hoakea wale  
Hoakea a'e la ka aha a ka ua i ka lani.  
Momoku iho la i ka piko o ka hanauna.

A mea no oe la, a he loko ino.  
I kuhi paha i kuu opio,  
He opio iluna ke alo.  
Iluna no ke alo, a hele no e.

I am at Kukui-lau-ania, Hilo,  
Gazing off at wide-spread Waiakea  
For all the rains of heaven have lifted.  
Our sisterly relation has been severed by  
many cuts.  
It is your doing, and a cruel thing.  
You consider me, perhaps, a youngster,  
A mere child to look up to you.  
I may be a child, but I leave you.

The chant of Kanemoa, used on Niihau with this figure, seems to have no relation to the form of the figure.

Ua e, ua, ka ua i Kanemoa.  
Aohe la e mao ai.  
Puna nui hele mai,  
Hele mai ka ua alaila.  
A Waioli pa ka makani  
Hoolike ka ua o Puuloa.

Rain, rain, it rains at Kanemoa.  
The downpour never stops.  
It reaches to Puna nui  
And at Waioli the tempest rages  
Like the rain of Puuloa.

KUKUILAUANIA A, OR KANEMOA, METHOD NO. 2

1. Opening A.
2. Pass indexes from distal side into thumb loops and pick up radial thumb string and release thumbs. Then pass thumbs from proximal side into the distal index loop and take it off indexes. This twists the original thumb loop.
3. Pass thumbs from proximal side into index loops and release indexes. Then pass indexes from distal side into thumb loops and pick up the distal radial thumb string and release thumbs from this string. This twists the index loops.
4. Pass thumbs distal side of index loop and pick up radial little finger string and release little fingers. Then pass little fingers distal side of intervening strings and pick up distal radial thumb string and release thumbs from it. This twists little finger loop.
5. Pass thumbs from proximal side into index loops then pick up radial little finger string. Release little fingers and extend.
6. Pass little fingers distal side of index string and pick up ulnar thumb strings. Release thumbs.
7. Pass thumbs distal side of index strings and pick up radial little finger strings.
8. Pass each index finger beyond the palmar string of its hand down from distal side into its own loop. Release little fingers and extend, turning indexes away and up.

This is the same figure as method no. 1 held on indexes instead of little fingers.

KUKUILAUANIA, B

This variation of Kukuilauania is perhaps due to the difficulty of making movement 4 of that figure.

1. Make movements 1-3 of Kukuilauania A, method no. 1.
2. Pass little fingers distal side of index loop and pick up ulnar thumb strings. Release thumbs.
3. Pass thumbs on distal side of index loop and pick up radial little finger strings.

4. Release indexes. Extend so that large triangle appears. Hold so that base of triangle is up and apex down. (See fig. 53.)

For chant see Kukuilauania A method no. 1.

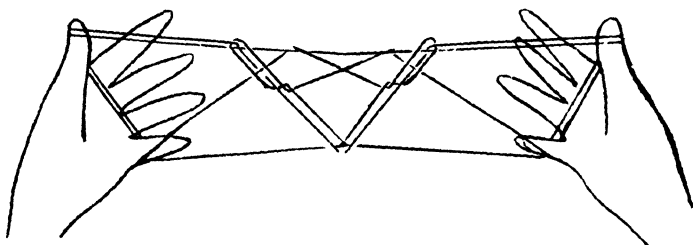
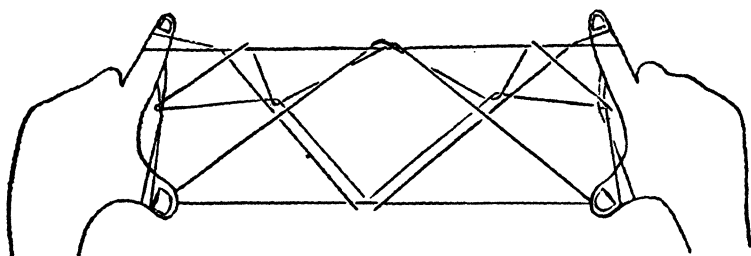


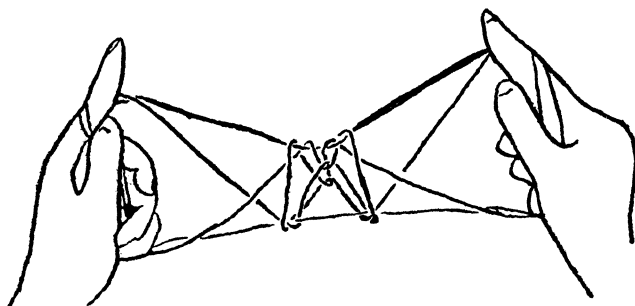
FIGURE 53.—String figure, Kukuilauania (kukui trees with scorched leaves), made on Oahu.

### GATE

1. Opening A.
2. Twist thumb, index and little finger loops by passing each digit away, down, toward body under the loop and up.



*a*



*b*

FIGURE 54.—String figures: *a*, name forgotten, made on Oahu; *b*, "gate," continuation of *a*.

3. Pass thumbs distal side of index loop and pick up radial little finger string.
4. Pass little fingers distal side of index loop and pick up ulnar thumb string.
5. Pass indexes over palmar strings down into index loops; release little fingers and extend, turning indexes away from all strings and up. This makes a figure whose Hawaiian name is forgotten. (See fig. 54, *a*.)
6. Release thumbs. Put all fingers from distal side into index loops and extend by stretching indexes and little fingers apart.

This makes the "gate" (fig. 54, *b*).

# IMU

Use longer string than usual.

1. Opening A.
2. Twist index loops by passing indexes away, down, toward body under their loop, and up.

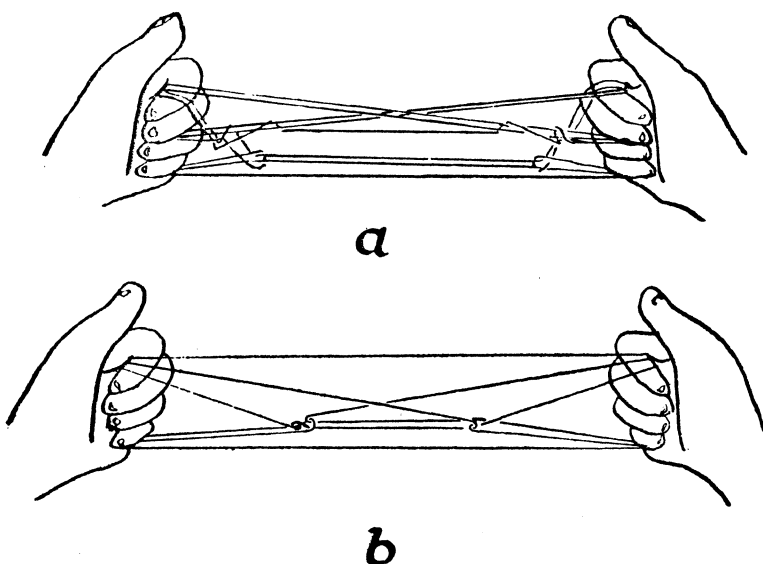


FIGURE 55.—String figures: *a*, imu (oven), made on Oahu; *b*, name forgotten, continuation of *a*.

3. Pass thumbs distal side of index loop and pick up radial little finger string.
4. Pass little fingers distal side of index loop and pick up ulnar thumb string.

5. Opening A.
6. Release thumbs then pass thumbs distal side of index strings and pick up radial little finger strings.
7. Pass each index over the palmar strings of its hand and down into its own loop close to index. This is accomplished by help of the opposite index which pushes palmar strings toward palm.
8. Release little fingers and extend, turning indexes away and up.
9. Pass each ring finger from the ulnar side into the loop around its index loop and then toward body (in a radial direction) distal side of the transverse string that extends from side to side of the figure and hold down on palms.
10. Pass thumbs from proximal side into index loops. Release indexes.
11. Pass indexes from distal side into thumb loops. Release thumbs and extend, turning indexes toward body and up.  
This makes imu (fig. 55, *a*).
12. Release indexes, insert indexes, middle fingers and little fingers from proximal side into ring finger loops and extend, drawing hands apart and fingers wide spread.  
The name of this final figure (fig. 55, *b*) is lost.

#### UMI A HAKA

The name *umi a haka* means "strangled and placed on an altar" and refers to the human sacrifice with which a heiau was dedicated.

1. Opening A.
2. With thumbs hold down index and radial little finger strings while passing indexes distal side of ulnar little finger string, around it and back to position, thus picking up ulnar little finger string. Then thumbs resume position.
3. Pass thumbs distal side of index strings and pick up radial little finger string.

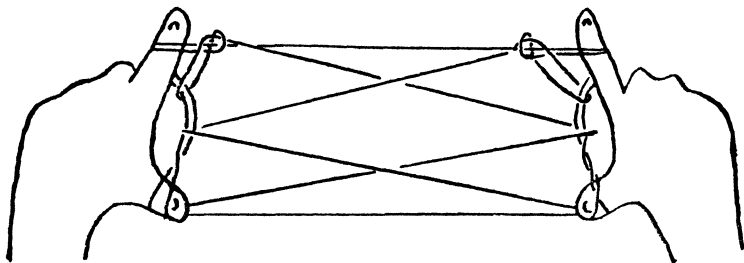


FIGURE 56.—String figure, *umi a haka* (strangled and placed on altar), made on Oahu.

4. Pass little fingers distal side of index strings and pick up ulnar thumb string.
5. Pass each index over palmar strings of its hand and down into its own loops close to itself. This is done by help of the opposite fingers.
6. Release little fingers and extend, turning indexes away and up. (See fig. 56.)

HULA LUMAHAI, KAI O LEAHI, WAAWAA IKI, WAIWAI E, OR WAA LIILII

The simple figure, *hula Lumahai*, has inspired five different chants. The first, a Kauai one, alludes to a robber Kapuaapilau who lived at Kealahula between Lumahai and Hanalei, where the path runs along the sea-coast and at times, where it leads around a headland, is covered by the sea. While Kapuaapilau lay in wait, his watchman on a little hill would make a cry, apparently innocent, which would tell him whether the travelers were too strong in numbers. The cry of the chant says the travelers are too many to be safely attacked. When few the robber would kill the travelers and throw the bodies in a hole in the rocks, whence they were carried to sea.

1. Opening A.
2. Pass index fingers from distal side into little finger loops, turn them toward body around the radial little finger string and the index strings and up.
3. Pass each thumb from proximal side between middle finger of its hand and the string that lies on palmar side of index middle and ring fingers,

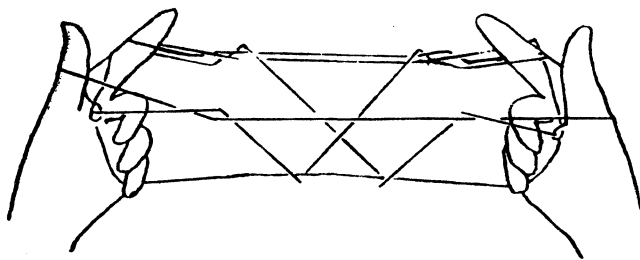


FIGURE 57.—String figure, *hula Lumahai* (Lumahai swimming path), *kai o Leahi* (sea of Leahi), *waawaa iki* (little fool), *waiwai e* (rich man), or *waa liilii* (little canoe), made on Hawaii, Kauai, and Niihau.

pick up this string with back of thumb and draw it through thumb loop, original thumb loop falling off. Release little fingers.

4. Pass little fingers through figure from proximal side, one on each side of central cross, and with them hook down on palms the transverse string that runs from side to side on the radial side of figure. Extend, palms

toward each other, indexes horizontal and pointing away, thumbs up and inclined toward body. (See fig. 57.)

Say:

Piha-piha, Kai o Ke-ala-hula.

The Sea of Ke-ala-hula is rising.

5. Release little fingers and say, while extending:

Piha lele u.

Dashing high.

A Niihau chant for this figure is:

Na kanaka alualu Kai o Leahi.  
Piha lele u.

Men chase the Sea of Leahi.  
The sea leaps over them.

Two rocks which resemble men stand at edge of the sea and seem to run into the ocean when the sea rushes in.

Another chant is:

“Waawaa iki naaupo,  
Homai ke i’a.”  
“Aole i’a,  
He ka wale no.”

“Little stupid fool,  
Give me some fish.”  
“No fish,  
A bailing dish only.”

A variant of this is:

“Waiwai e, waiwai e,  
Homai he i’a.”  
“Aole i’a,  
He ka wale no.”

“Rich man, rich man,  
Give me a fish.”  
“I have no fish,  
Only a bailer.”

The scene is the meeting of two fishing canoes.

Another chant is:

Na waa liilii kiolea, kiolea,  
Mauka mai, makai mai, mauka mai,  
Hoolohe kakou kani o ka alae.  
Ka alae hea? ka alae po’a aku,  
Po’a mai i ka wai nui.  
Auhea la ka kaua manu o kauakahi?  
Ina ua hala aku la,  
Ia wai ka hanai?  
Ia lauki nui a ka eleele,  
Ai a manu, ai a manu,  
Ka ai a ka’u manu.

Little curlew, curlew canoes,  
From upland, from seashore, from upland,  
Let us listen to the song of the mudhen.  
What mudhen? the mud hen diving there,  
Diving toward us with a big splash.  
Where is our bird gone?  
If it has gone away  
Who will feed it?  
Ti leaf large and dark,  
Bird fare, bird fare,  
Fare of my bird.

Pueo e haule i lalo.  
Aukuu, e kahikahi mai.

Owl, camp below.  
Heron, step aside.



## PAUMA OKI HALA O KAHUKU, POHUEHUE, OR NA WAA KIOWEA

1. Make first four movements of *hula Lumahai* (p. 95).
2. Release indexes and extend. (See fig. 58.)

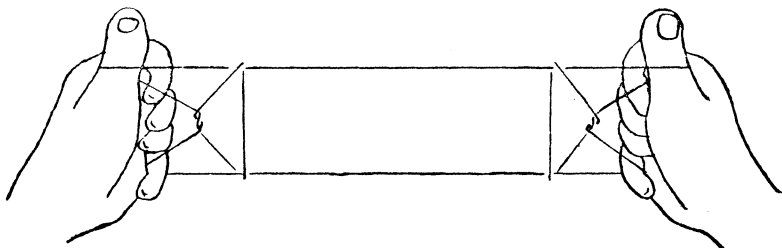


FIGURE 58.—String figure, *pauma oki hala o Kahuku* (knife that cuts the Kahuku hala), *pohuehue* (convolvulus), or *na waa kiowea* (kiowea canoes), a continuation of *hula Lumahai*, made on Kauai and Niihau.

## WAIU OLEWA D, OR WAIU O NE

The figure *waiu olewa D* (pendulous breasts) or *waiu o Ne* (breasts of Ne) is made on Kauai and Niihau.

1. Make first three movements of *hula Lumahai* (p. 95).
2. With balls of little fingers, hook down on palms the side strings of the radial triangle of the central cross of the figure.
3. Release indexes. Draw tight, then release little fingers and let their loops hang.

## KIPUKA HELE LA MAUI, OR KIPUKA ILI O WOKA LALE

This figure makes the famous lasso with which Maui caught, and broke off, one by one, the legs which the sun put over Haleakala, as he climbed out of the pit of night to start his day's journey round the world, until the sun agreed to travel more slowly and allow Maui's mother time to do her day's housework.

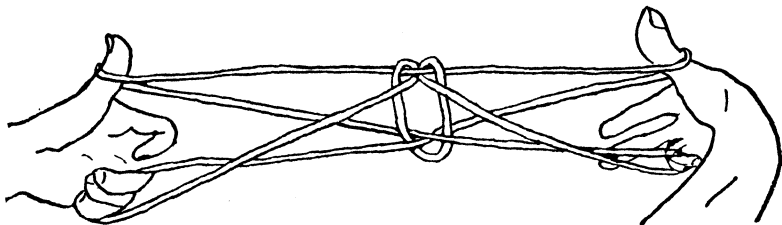


FIGURE 59.—String figure, *kipuka hele la Maui* (lasso of Maui), *kipuka ili o Woka Lale* (noose of Walter Raleigh), made on Kauai and Niihau.

The second title, Noose of Walter Raleigh, is a historical error. Walter Raleigh was decapitated, not hanged.

1. Make first three movements of *hula Lumahai* (p. 95).
2. With balls of little fingers, hook down on palms the side strings of the ulnar triangle of the central cross of the figure.
3. Release indexes and extend gently until circle is formed in center of figure. (See fig. 59.)

### WEOWEO

1. Make first three movements of *hula Lumahai* (p. 95).
2. With ball of left little finger hook down on left palm the left side string of the radial triangle of the central cross of the figure.

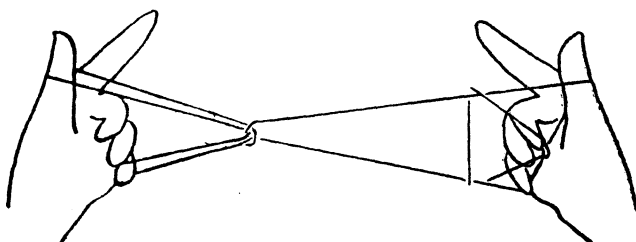


FIGURE 60.—String figure, *weoweo*, made on Niuhau.

Pass right little finger through right triangle of central cross and hook down on right palm the transverse string that runs from right to left across the figure on its radial side.

3. Release indexes and extend. Near the right hand is the head of the *weoweo* fish, near the left hand, its tail. (See fig. 60.)

### NA KANAKA ALUALU KAI O LEAHI

The figure *na kanaka aluolu kai o Leahy* has the same name and chant as one of the figures in *hula Lumahai* (p. 96). The motion at the end is like that of *hale paakai* (p. 104). The figure is the same as *anatifaia* (back of house), made in Marquesas Islands (15, p. 39), with slight differences of making.

1. Opening A.
2. Pass index fingers from distal side into little finger loops then toward body around the radial little finger string and the index strings and up.
3. Release little fingers, pass thumbs from proximal side into index loops and extend.
4. Navaho proximal thumb string.

5. Pass little fingers from proximal side into index loops and pull down on palms the transverse string that runs from right to left across the figure.

6. Release indexes; pass indexes from distal side into thumb loops; release thumbs and extend. (See fig. 61.)

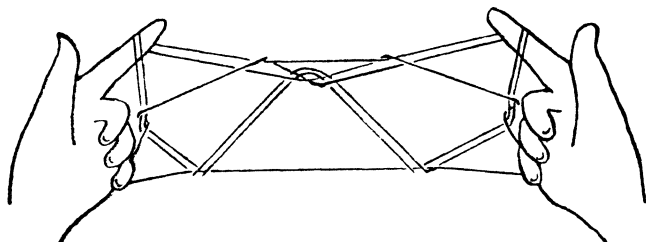


FIGURE 61.—String figure, *na kanaka alualu kai o Leahi* (men who chase the Leahi sea), made on Niihau.

7. Repeat chant of this name in *hula Lumahai* (p. 96) and at last line put thumbs from distal side into little finger loops and with their backs lift up the two strings that from ulnar little finger string cross each little finger loop.

#### HAPUU-KANE, HAPUU-WAHINE, OR PUU-UALA NUI, PUU-UALA IKI

1. Opening A.

2. Pass indexes from distal side into little finger loops. Then toward body, proximal to radial little finger string and index strings and up to position.

3. With backs of thumbs pick up the strings that run from dorsal side of little fingers to palmar side of indexes, bring them proximal side of index loops, then through thumb loops from distal side, the former thumb loops slipping off. Release little fingers.

4. Pass little fingers through figure, one on each side of central cross and with them hook down on palms the transverse string that runs from side to side on the radial side of figure.

5. Pass thumbs from radial side into the large triangle whose base is the index strings and whose apex is at the point where strings cross near center of the figure. Release indexes.

6. With ring fingers pull down the two ulnar thumb strings on palms.

7. Pass index fingers proximal to the proximal radial thumb string, then distal to the other two radial thumb strings (that go straight from thumb to thumb) around these and back, picking them up. Extend on indexes and little fingers, radial index strings high, ulnar little finger string low.

Rock figure slightly by alternately stretching and loosening index or little finger strings for each line of the chant. (See fig. 62, a.)

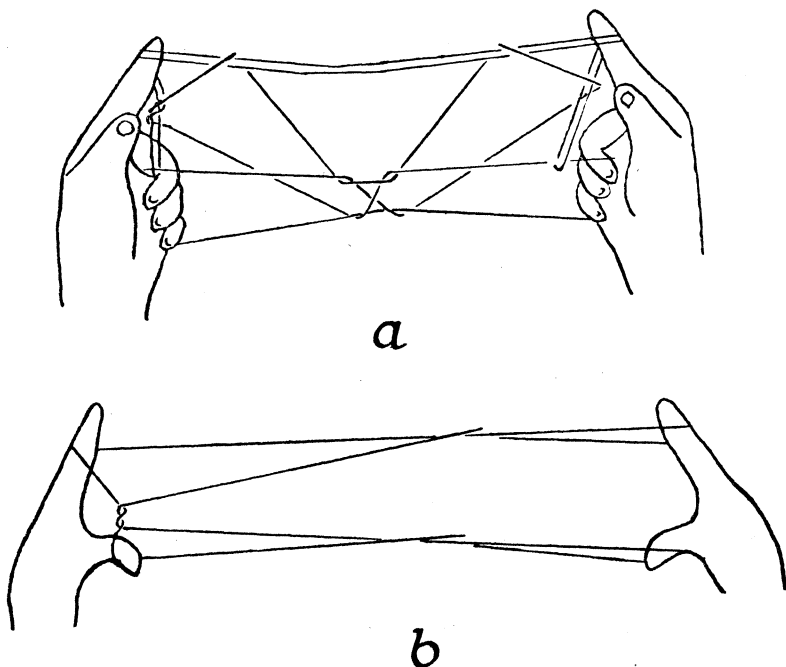


FIGURE 62.—String figures: *a*, *hapuu-kane*, *hapuu-wahine* (male child, female child), *puu-uala mui*, *puu-uala iki* (large potato hill, small potato hill), made on Oahu; *b*, *Puuloa* (Long Hill), a continuation of *a*.

Hapuu-kane, hapuu-wahine, ka'u puu  
ho'i, ka puu maluna, ka puu malalo,  
Hanee aku ana, hanee mai ana, Uko'a  
me Loko-'ea.

A ka welelau o Puu-loa  
No Hanalei nei aloha,  
No kuu kane hoouluko'a  
Hooulu wehiwehi olalo e.

Male child, female child, my children in-  
deed, one above, one below,  
When one is born, another is conceived,  
passing from the womb to the world.  
When birth ends a long carriage.  
Love to the provider here.  
To my husband who gives me children;  
Who raises a beautiful garden at our  
feet.

or:

Hapuu-kane, hapuu wahine,  
Hanee aku ana, hanee mai ana.  
Poha ka wekaweka, me ka le'ale'a.

Male child, female child,  
When one is born another is conceived.  
The birth waters burst forth to my joy.

Ukoa and Lokoea are two fish ponds at Waialua, Oahu, their names here being used figuratively.

8. Around ulnar little finger string are two loops. Pass thumbs away

outward into these two loops from the proximal side of figure. Release indexes and extend.

9. Pass indexes from distal side into thumb loops, then on proximal side of the radial thumb string that is not a straight string from thumb to thumb and on the distal side of the radial thumb string that does go from thumb to thumb, then over this string (in radial direction) around it and back through the thumb loop picking up this string on backs of indexes. Release thumbs and extend. This makes *papio-maka-nui* (large eyed *papio*). See "two eyes" page 21 for making this as an independent figure. This is a favored termination of figures.

10. Rest figure on lap, proximal side up. Pass right thumb from distal side into right little finger loop and release right little finger. Release left thumb and index from figure and pass left thumb down into nearer triangle of central cross and left index down into further triangle of central cross. Bring all indexes and thumbs under intervening strings and up in right hand diamond of figure and extend.

This is Puuloa (Long Hill), the name of a district on Oahu. (See fig. 62, b.)

11. Pass little fingers from proximal side into index loops and pull down radial index string while indexes pass from distal side into thumb loops and back through index loops, picking up ulnar thumb string.

12. Pass thumbs from proximal side into index loops. Release indexes.

13. Pass indexes from distal side into thumb loops, proximal side of the distal radial thumb string and distal side of the proximal radial string, around this string and back to position, picking up this latter string.

14. There are three loops about radial index string. Pass thumbs from proximal side into figure just below (ulnar side) of the two outside loops, then proximal side of the ulnar little finger string and around ulnar little finger string picking it up. Extend.

This is "three eyes C" or *papio-maka lili'i* (*papio* fish with large eyes) (p. 26).

## WAA

The figure *waa* is made in Torres Strait as *gul* (canoe) and *ti meta* (nest of *ti* bird) (18, p. 85); and is made in Lifu, Loyalty Islands, as *tim* (a well) (18, p. 85); in Society Islands as *apoo mahai ahaana* (15, p. 76); and in Fiji, as *velovelo* (dugout canoe) (17, p. 20).

1. Opening A.

2. Pass indexes from distal side into little finger loops then in radial

direction around radial little finger string and index strings to position. Release little fingers.

3. Pass little fingers into index loop from distal side and hook down ulnar index strings on palms.

4. Pass middle fingers through index loops from distal side and into

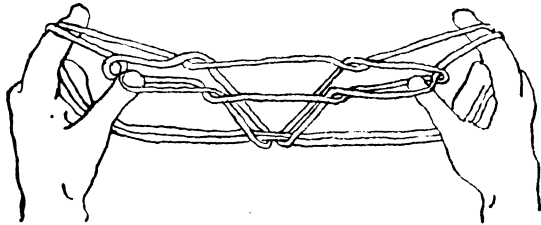


FIGURE 63.—String figure, *waa* (canoe), made on Oahu.

thumb loops from proximal side. Release thumbs, letting the thumb loops fall on middle fingers but do not withdraw middle fingers.

5. Pass thumbs into middle finger loops from distal side close to middle fingers and with their backs pick up the radial index string that is not a straight string from index to index and draw through the middle finger loop. Release middle fingers and extend. Palms toward each other, indexes horizontal and pointing away, thumbs up and bent toward body so that sides of the canoe will match each other. (See fig. 63.)

#### UALA

1. Opening A.

2. Pass indexes from distal side into little finger loops, then in radial direction around radial little finger string and index strings to position. Release little fingers.

3. Pass little fingers from distal side into index loops and pull down the ulnar index strings; then pass them into thumb loops from proximal side and release thumbs. Little fingers hook down the strings they hold, on palms.

4. There are two central diamonds and their inner sides form an X. Pass thumbs outward into these diamonds (from proximal side of figure) and then back through the upper V of this X picking up the sides of the V (the strings that are looped about distal radial index string) with the backs of thumbs.

5. Release the little finger string that runs straight from little finger to little finger. Pass little fingers from proximal side into thumb loops. Release thumbs.

6. There are two small loops around the proximal radial index string (the string that is a straight string from index to index). Pass thumbs between these loops on ulnar side of proximal radial string and with backs of thumbs pick up the distal radial index string and bring it back through center of figure to thumbs' usual position.

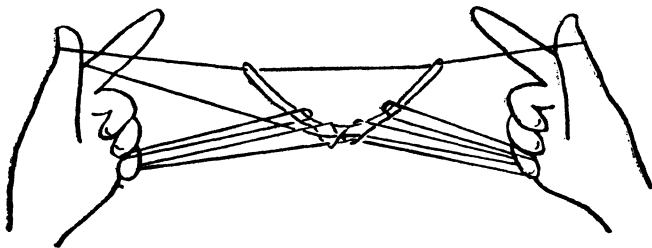


FIGURE 64.—String figure, *uala* (sweet potato), made on Niihau.

7. Release distal little finger string. Pass little fingers from proximal side into thumb loops and release thumbs.

8. Pass thumbs under and pick up close to indexes with backs of thumbs the radial index string that is a straight string from index to index. Release indexes and extend. (See fig. 64.)

#### BRIDGE

1. Opening A.

2. Pass indexes from distal side into little finger loops, inward (in radial direction) under (proximal side of) index strings and then between ulnar thumb string and index strings to position.

3. Release little fingers. Pass thumbs from proximal side into index loops and extend.

4. Pass little fingers distal side of index strings and pick up ulnar thumb string. Release thumbs.

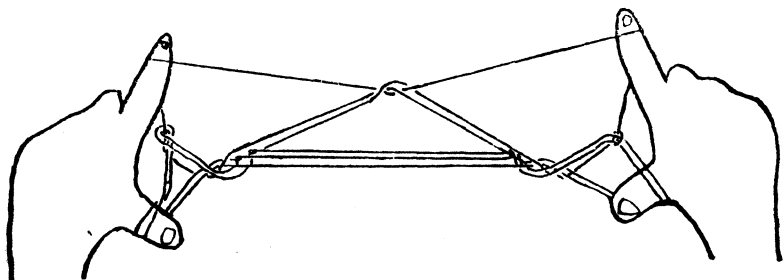


FIGURE 65.—String figure, "bridge," made on Oahu.

5. Pass thumbs distal side of index strings and pick up radial little finger string.
6. Pass thumbs from proximal side into index loops, close to indexes.
7. Navaho proximal thumb loop.
8. Pass indexes from distal side into small triangles near thumbs. Release little fingers and extend, turning indexes away and up. (See fig. 65.)

#### HE KANAKA A, ANA PAAKAI, OR HALE PAAKAI

The figure *he kanaka A*, is the first of four figures having the same chant with many slight variations in wording. In its varying forms it is one of the most popular of Hawaiian string figures. The figure *na kanaka alualu kai o Leahi* (p. 98), has a similar movement at the end, so possibly in some places it has this name and chant.

Two live in a house or cave who do not care to entertain beggars. If a man approaches bearing a gift, he is welcome, if not the door is shut in his face. "Salt" in the chant and title stands for anything of value, for salt was something people often had to travel far to get. The title perhaps means "wealthy home."

1. Opening A.
2. Put the four fingers of each hand from distal side into thumb loops and pick up radial thumb string, releasing thumbs.
3. With fingers pointing up, pass thumbs under all the strings, except the ulnar string that passes back of hands, and with backs of thumbs pick up ulnar little finger string (not the string that passes back of hands) and bring it back below the strings to the front.
4. Pass thumbs over radial index string and pick up on backs of thumbs the ulnar index string. Release little fingers.
5. Pass little fingers over intervening strings and pick up the ulnar thumb string. Release thumbs.
6. Pass thumbs over index strings and pick up radial little finger string.
7. Put radial index strings and the string that passes back of the hands (picking them up between palmar string and index) over thumbs.
8. Navaho lower thumb loop.
9. Put indexes down into triangles near thumbs. Release all strings but the thumb strings and palmar index string and extend, turning indexes away and up. Do not draw too tight or the ornamental work at the top of the house or cave may be injured.
10. Pass little fingers from proximal side through thumb loops, pick up the loose, transverse string and pull it back through thumb loops. Release thumbs or not according to taste.

The figure represents entrance to a house or cave. It resembles a little



the figure that in New Zealand is called the carved house, the upper part of the figure representing carving. Hawaiian houses, however, have no carving.

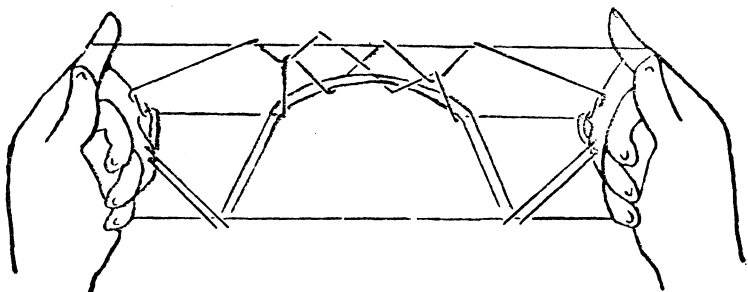


FIGURE 66.—String figure, *he kanaka* (a man), *ana paakai* (salt cave), or *hale paakai* (salt house), made on all Hawaiian islands.

"He kanaka, he kanaka."

"Ae, keia."

"Heaha ma ka lima?"

"Aole puolo pa'akai."

"Paniia, paniia, ka puka o ko kaua hale."

"A man, a man."

"Yes, this one."

"What is in his hand?"

"No bundle of salt."

"Shut, shut, the door of our house."

11. When saying the last line, by stretching thumbs toward body (picking up any strings dropped in movement 10) shut the entrance.

"He kanaka, he kanaka"

"Ae, keia."

"Heaha ma ka lima?"

"He puolo pa'akai."

"Weheia, weheia, ka puka o ko kaua hale."

"A man, a man."

"Yes, this one."

"What is in his hand?"

"A bundle of salt."

"Open, open, the door of our house."

Slack thumbs and the door opens. (See fig. 66.)

#### HE KANAKA B, ANA PAAKAI, OR HALE PAAKAI

1. Opening A.

2. Pass four fingers of each hand inward over ulnar thumb string and pick up radial thumb string. Release thumbs.

3. Pass thumbs distal side of index strings and radial little finger string and under and pick up ulnar little finger string (not the string that passes back of hands).

4. Thumbs pick up the two radial index strings between index fingers and palmar strings.

5. Navaho thumbs.

6. Put indexes down into the triangles near thumbs. Release little fingers and extend by turning indexes away and up.

7. Put little fingers up through thumb loops and pull the loose string that crosses the figure down through thumb loops. Release thumbs and extend. (See fig. 67.)

For chants see *he kanaka A* (p. 105).

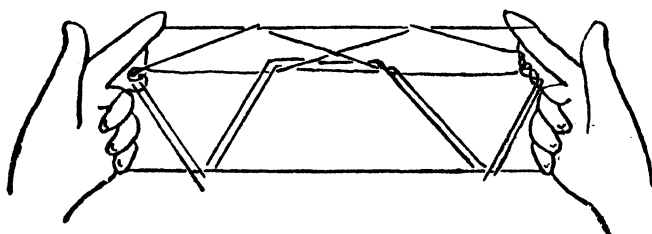


FIGURE 67.—String figure, same names as figure 66, made on all Hawaiian islands.

#### HE KANAKA C, ANA PAAKAI, OR HALE PAAKAI

1. Opening A.
2. Thumbs pick up radial index string. Release little fingers.
3. Pass little fingers over ulnar index string and under and pick up ulnar thumb string. Release thumbs.
4. Pass thumbs over index strings, under and pick up radial little finger string.

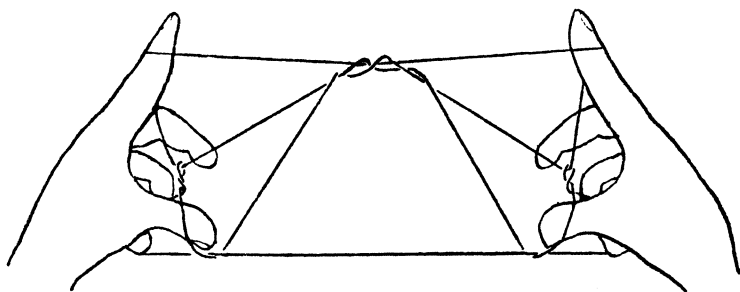


FIGURE 68.—String figure, same names as figure 66, made on Kauai.

5. Pass thumbs from proximal side into index loops between palmar string and index fingers.
6. Navaho thumbs.
7. There is a small triangle near each thumb, one side of which is a string looped around the thumb loop, one a string that leads to the little finger of each hand and one a string that goes straight across the figure. Put indexes down into these triangles. Release little fingers and extend by turning indexes away and up.

8. Put little fingers up through thumb loops from proximal side and hook down through thumb loops the string that after looping around ulnar index string crosses both thumb loops on distal side. (See fig. 68.)

#### HE KANAKA D, ANA PAAKAI, OR HALE PAAKAI

1. Opening A.
2. Pass thumbs proximal side of all strings, pick up ulnar little finger string on backs of thumbs and return proximal to all strings. Release little fingers.
3. Pass little fingers distal side of index strings and pick up the ulnar thumb strings.
4. Lift the radial thumb string that is a straight string from thumb to thumb over the other radial thumb string and off the thumb, tossing it away over the index strings. Do not draw tight.
5. Put indexes over palmar strings down into index loops close to the palmar strings and radial side of the string that has just been taken off the

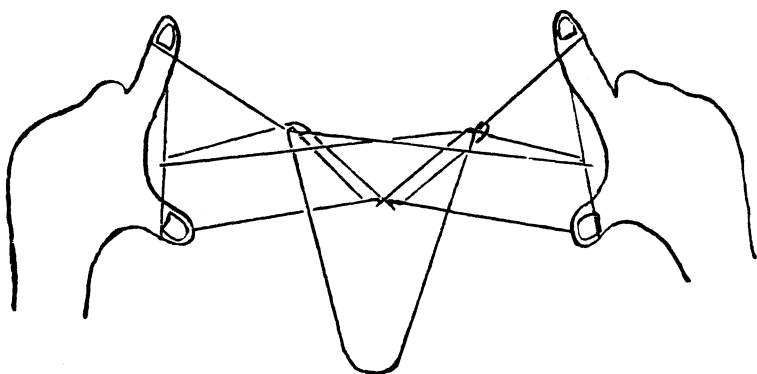


FIGURE 69.—String figure, same names as figure 66, made on Hawaii.

thumbs. Release little fingers and extend, turning indexes away and up, but do not draw so tight as to tighten the string that in movement 4 was taken off the thumbs.

6. Toss toward body over the rest of the figure the string that in movement 4 was taken off the thumbs.

If this string be now alternately pulled and loosened (by mouth or second player) the central hole of the figure (shaped like a V) will close and open.

Use the same chants as in *he kanaka A* (p. 105). (See fig. 69.)

## HAIKU A

The first stage of the figure Haiku A is identical with Hilo, the 5th stage of *ku c hoopio ka la* (p. 16), and the methods begin with a similar opening.

1. Position 1. From distal side pick up left palmar string with ball of right index and extend.

Pass left index from proximal side into right index loop and from distal side, with ball of left index pick up right palmar string and extend. (This is like Opening A made with indexes turned down.)

2. Pass indexes from proximal side into little finger loops, pick up radial little finger string, and straighten up indexes. Release little fingers.

3. Pass little fingers from proximal side into index loops and pull down radial index strings and hold on palms.

4. With backs of thumbs, from proximal side pick up the ulnar index string that is a straight string from index to index, and take it off indexes.

5. Pass left middle finger from proximal side into left index loop, hook right ulnar index string and draw it through left index loop.

With ball of right middle finger from ulnar side hook left ulnar index string and pull it toward right.

6. Pass indexes from distal side into middle finger loops, then around the radial middle finger strings and up. Release middle fingers.

7. Pass thumbs from proximal side into index loops and release indexes.

8. Pass indexes from distal side into thumb loops and with their backs pick up distal radial thumb string and release thumbs from this string.

9. One of the radial thumb strings after passing around thumbs makes two loops about little finger strings.

Pass middle fingers from right and left toward center of figure between the index strings and thumb strings, turn hands so that indexes are low and thumbs high and drop above mentioned radial thumb string off thumbs upon middle fingers and with middle fingers hook it to the right and left of the figure.

10. Pass thumbs from proximal side into index loops and release indexes.

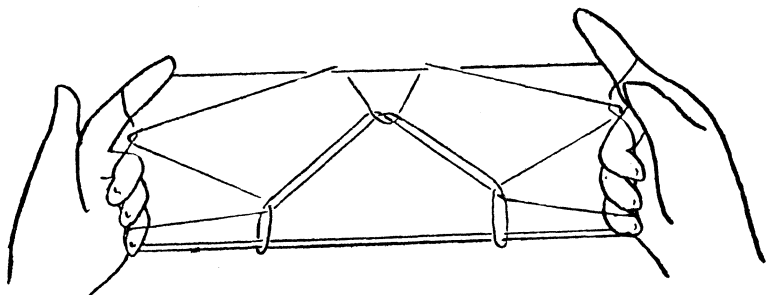
11. Pass indexes proximal side of ulnar thumb string, then distal side of the radial middle finger string and around it picking it up as indexes go back to position. Release middle fingers and release thumbs except from the radial thumb string that is a straight string from thumb to thumb.

12. Pass thumbs from proximal side into index loops and release indexes.

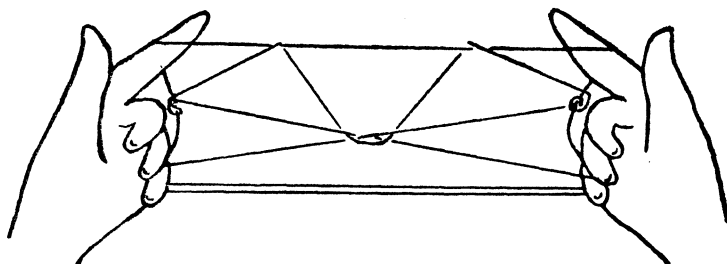
13. Pass indexes into thumb loops from distal side then on distal side

of the radial thumb string that is a straight string from thumb to thumb, around this string and back to position. Release thumbs.

This makes the house of Haiku with two hills behind and above the house where the road of Haiku runs. (See fig. 70, *a*.)



*a*



*b*

FIGURE 70.—String figures: *a*, "Haiku," made on Hawaii; *b*, *awili-pua* (flower-twined), a continuation of *a*.

Say:

Hele i ke ala o Ha'iku

Eia la, 'eia.

Aniani mai kona aloha

Maluna mai o 'Awili-pua.

As he went along the path of Haiku,  
(audacity)

This is it,

Thoughts of love floated to him

Down from flower-twined Awilipua.

14. Pass thumbs outward on radial side of ulnar little finger string and between the two loops around these strings and push these two loops slightly apart, so that figure will not fall while little fingers are released; then pass little fingers from distal side to the positions of the thumbs, withdraw thumbs and extend. (See fig. 70, *b*.)

This represents *awili-pua* (flower-twined)

Kona aloha kawalawala  
 Hele i ke ala o Malae.  
 Loaa i ko makuakane  
 Na wiliau alo Ka-lua-u

Malaila hole'ole'o na ale o Kumu-kahi  
 Ke lii i ka la e.

Then his vagrant love  
 Went on the path of shy Malae.  
 The father found it out  
 Then whirled and eddied the waves be-  
     fore Kaluau, the pit of woe;  
 There crashed the fierce breakers of  
     Kumukahi,  
 Chief, of the day.

Kumukahi is a place near Hilo famed for its fierce waters. Kaluau is a rocky pile at Kumukahi over which the sea breaks. Waves are used metaphorically for emotions and controversy.

#### KALALEA

Kalalea is a sharp, prominent peak in the mountain range above Anahola, Kauai. Jutting from it is a shorter peak with a hole in it, named Koananai, that has many legends connected with it.

1. String on thumbs and indexes. Pass little fingers over strings and hold on palms. Bring hands near each other, backs up, thumbs and indexes pointing down.

Pass right index to left over left dorsal string and pick up this string with ball of index. Release left index from string and pass left index to right above right dorsal string and pick up this string with ball of left index, then pass left index from proximal side into right index loop.

2. Turn both indexes away and up, picking up the two ulnar index strings, at same time turning up thumbs toward body and releasing little fingers, extending into usual position.

3. Pass little fingers from proximal side into index loops and pull down on palms radial index strings.

4. Thumbs pick up the ulnar index string that is a straight string from index to index. Release this string from indexes.

5. Pass thumbs from proximal side into index loops and extend.

6. Pass middle fingers toward body over index and thumb strings and hold down on palms.

Bring hands near each other, thumbs pointing toward each other. Pass right thumb to left under the dorsal left thumb-left index string and pick it up, releasing left thumb from this string.

Pass left thumb toward the right over the dorsal left index-right thumb string and under the dorsal right index-right thumb string and lift up this latter string and draw it to left, off of right thumb. Release middle fingers and extend.

7. Pass thumbs from proximal side into index loops. Release indexes.

8. Pass indexes from distal side into thumb loops, with them push in radial direction the two most distal radial thumb strings, then pass indexes over, down and around the shorter of the two proximal radial thumb strings (not the one that runs from thumbs to palmar side of little fingers) and bring it back through thumb loops, releasing thumbs from all strings except the other straight radial thumb string. The indexes may need the

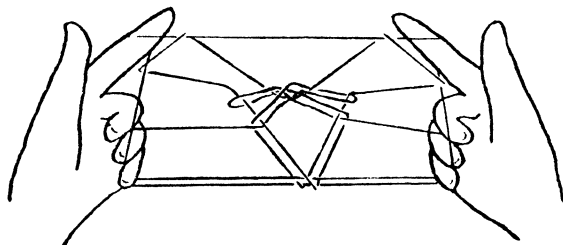


FIGURE 71.—String figure, *kalalea*, made on Kauai.

help of the middle fingers to execute this movement. If middle fingers are passed with indexes into thumb loops and hold down the proximal radial thumb string that the indexes do not pick up, this will make the movement easier.

9. Pass thumbs from proximal side into index loops. Release indexes.

10. Pass indexes from distal side into thumb loops, over the proximal radial thumb string, down and back, picking up this string and bringing it back through the thumb loops. Release thumbs and extend. (See fig. 71.)

Say:

Aloha wale Kalalea noho ma i uka,  
E pili ana me Koananai  
Me Koula i ka malia.

I pity Kalalea living up the mountain  
Embracing Koananai  
While Koula has a calm place.

The opening in the lower part of the figure represents the hole through the mountain. Legend says this was made by the war club of the giant, Kauahoa, by the spear of Kawelo, and by many other spears.

#### HAWAII, HALE ILUNA, AND HALE LOULU O KANE

1. Movements 1-6 of Kalalea.

2. Release indexes. Near each palm, strings from the thumb are looped around the little finger strings.

Pass right index toward the left into the loop nearest right hand and with ball of index hook and pull back through the loop the string that runs from right thumb to left little finger. Substitute right ring finger for right index and hold on palm back of the other strings that come from the thumb.

Simultaneously with movements of the above paragraph pass left index toward the right into the loop nearest left hand and with ball of index hook and pull back through the loop the string that runs from left thumb to right little finger. Substitute left ring finger for left index and hold on palm back of the other strings that come from the thumb.

3. Pass each index toward center of figure and into the loop that from the thumb of the same hand is looped around the little finger strings. Extend.

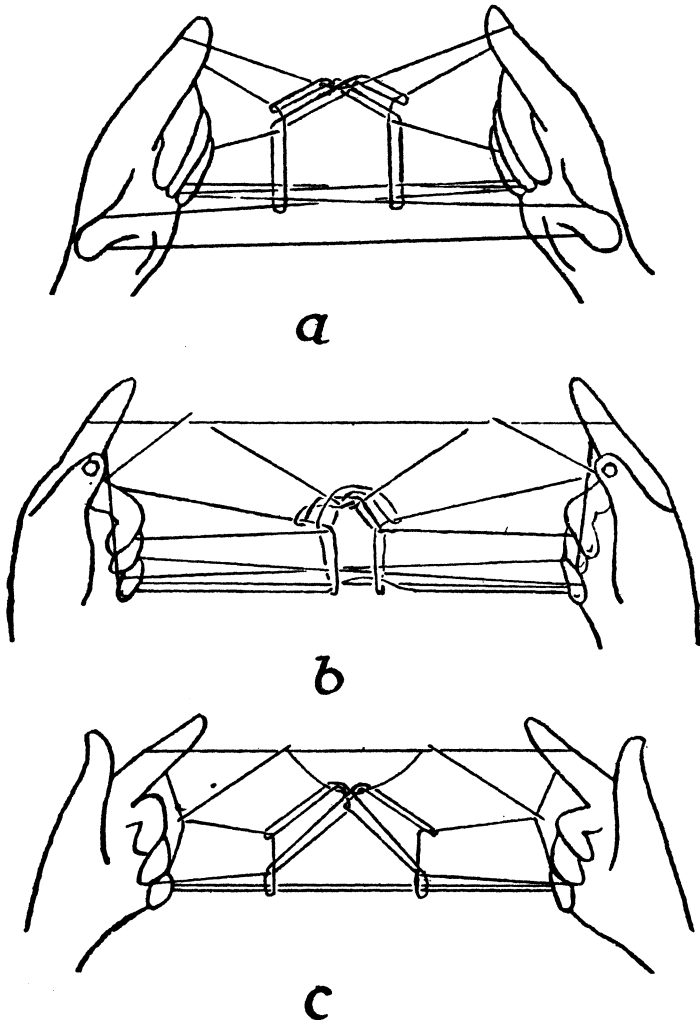


FIGURE 72.—String figures: *a*, "Hawaii," made on Kauai; *b*, *hale iluna* (house above), a continuation of *a*; *c*, *hale loulu o Kane* (palm house of Kane), a continuation of *a*.



4. With middle fingers hold down radial thumb strings. Bring hands near each other. Pass right thumb to left under the dorsal left thumb-left index string and pick it up, releasing left thumb from this string. Pass left thumb toward the right over the dorsal left index-right thumb string and under the dorsal right index-right thumb string and lift up this string and draw it to left off right thumb. Release middle fingers and extend.

5. Pass thumbs from proximal side into index loops and release indexes.

6. There are two straight radial thumb strings. One is looser than the other and runs from thumbs to little fingers. The other, shorter one, runs from thumbs to little finger loops and loops around them. Be sure that the longer one hangs free as the proximal radial thumb string, then pass indexes from distal side into thumb loops, toward body, over and to the radial side of the shorter straight radial thumb string and draw it back out of the thumb loops. Use middle fingers to assist the indexes. Release thumbs from all strings but the longer radial thumb string and extend.

This makes Hawaii (fig. 72, *a*). It is the same as the first stage of *ku e hoopio ka la* (p. 14), differing in some movements.

O Hawaii nui a Kane.

O, Great Hawaii of Kane.

O Hilo a Kane a ka po.

O Hilo, of Kane of the night.

O Hilo aina moku lehua i ke kai.

O, Hilo, district where the *lehua* reaches into the sea.

7. Pass thumbs from proximal side into index loops. Release indexes.

8. Pass indexes from distal side into thumb loops, over the straight radial thumb string, down and back, picking up and taking back through the thumb loops the straight radial thumb string. Release thumbs and extend.

This makes *hale iluna* (house above). (See fig. 72, *b*.)

9. Release ring fingers and extend.

This makes *hale loulu o kane* (palm house of Kane). (See fig. 72, *c*.)

# PUNANA

1. Position 1. Turn hands so that palms are outward and thumbs close to former ulnar little finger string. Pass thumbs over this string, down, toward body under both strings and up; at same time bringing hands back to a position with palms facing each other.

2. Opening A.

3. Pass thumbs distal side of index strings and pick up radial little finger string. Release little fingers.

4. Pass little fingers distal side of index strings and pick up ulnar thumb strings.

5. Put indexes over palmar strings down into central opening of the figure. Release little fingers and extend, stretching indexes away below strings and slightly up. (See fig. 73.)

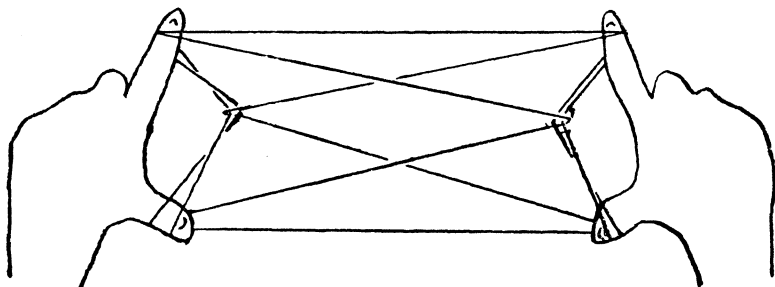


FIGURE 73.—String figure, *punana* (nest), made on Kauai.

### NOHO PAIPAI

1. Position 1. Turn hands so that palms are away and thumbs close to former ulnar little finger string. Pass thumbs over this string, down, toward body under both strings and up, at same time bringing hands back to position with palms facing each other.

2. Opening A.

3. Pass thumbs distal side of index strings and pick up radial little finger string. Release little fingers.

4. Pass indexes distal to the ulnar thumb string that is not a straight string from thumb to thumb and pick up with backs of indexes the ulnar thumb string that is a straight string from thumb to thumb.

This makes the familiar "soldier's bed" of the ordinary cat's cradle. A Hawaiian sailor told Culin it was *eke-manu* (ace of diamonds) (18, p.372) but I have heard no one at the present day give it this name. (See fig. 74.)

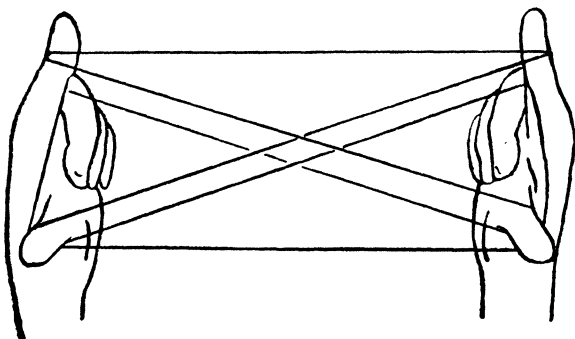


FIGURE 74.—String figure, *eke-manu* (ace of diamonds) or "soldier's bed," made on Hawaii; a stage of *noho paipai* (rostrum).

5. Let string just picked up by indexes slip outside and below the other index string so that it becomes the proximal ulnar index string. Then lift distal index loop off each index in turn; twist it by passing the ulnar string of the loop toward body distal to the radial string of the loop and then replace on index.

6. Let loops just replaced on indexes slip inside and below the other index loop so as to become the proximal index loop. Then navaho index loops.

7. With left thumb and index push the radial string that is a straight string from thumb to thumb, down inside the other radial right thumb string

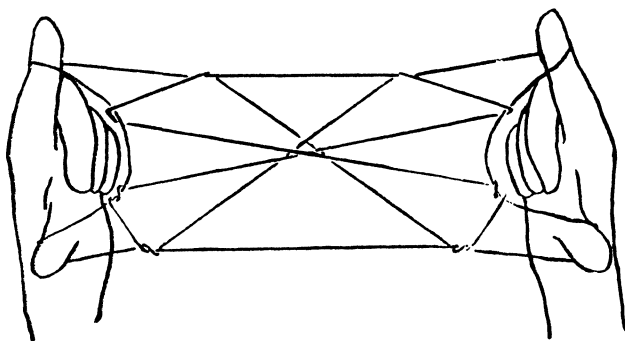


FIGURE 75.—String figure, *noho paipai* (rostrum) made on Hawaii.

to proximal side of it, then lift it over that string as in navahoing and off right thumb.

With right thumb and index push the same radial thumb strings where it is back of left thumb, down inside the other radial left thumb string to proximal side of it; then lift it over that string as in navahoing and off left thumb.

If resulting figure has radial and ulnar sides too near to each other, with middle and little fingers pull left and right sides of figure apart, which will put figure in proper shape.

This figure (fig. 75) represents a seat from which chiefs made speeches to their people.

#### HOKU B

1. Position 1. Turn hands so that palms are outward and thumbs close to former ulnar little finger string. Pass thumbs over this string, down, towards body under both strings and up, at same time bringing hands back to a position with palms facing each other.

2. The radial little finger string is above (distal side of) the palmar strings. With right hand lift off the left little finger loop, twist it once

round  $360^{\circ}$  passing radial side of loop first in ulnar direction, on distal side of the ulnar side of the loop, then replace on little finger. Treat the right little finger loop similarly. The radial little finger string now passes below (proximal side of) the palmar strings.

3. Opening A.

4. Pass thumbs from proximal side into index loop, then distal side of

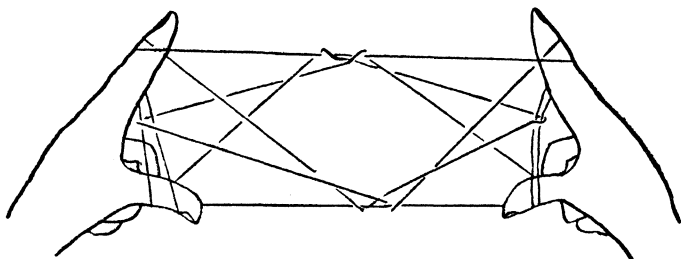


FIGURE 76.—String figure, *hoku* (star), made on Kauai.

ulnar index string and from proximal side into little finger loop and extend. Release little fingers.

5. Pass little fingers distal side of index string and pick up the ulnar thumb strings. Release thumbs.

6. Pass thumbs distal side of index strings and pick up the radial little finger strings.

7. Put indexes over palmar strings down into index loops. Release little fingers and extend, stretching indexes away under strings. (See fig. 76.)

### OPAE

The figure *opae* is the same as the familiar "fish in a dish" of the common cat's cradle.

At the close of the fourth movement the figure is equivalent to the "cradle," the first figure of cat's cradle but made in front of the hands, the two strings that in the usual cat's cradle are dorsal strings, being here palmar strings. From this point a second player could proceed as in ordinary cat's cradle.

1. Position 1. Turn hands so that palms are outward and thumbs close to former ulnar little finger string. Pass thumbs over this string, down, towards body under both strings and up, at same time bringing hands back to a position with palms facing each other.

2. Thumbs pick up radial little finger string.

3. Little fingers pick up ulnar thumb string.

4. Opening A with the two palmar strings nearest to each other.
5. Pass little fingers from distal side into index loops and hold ulnar index string with balls of little fingers. Release thumbs. Extend. (See fig. 77.)

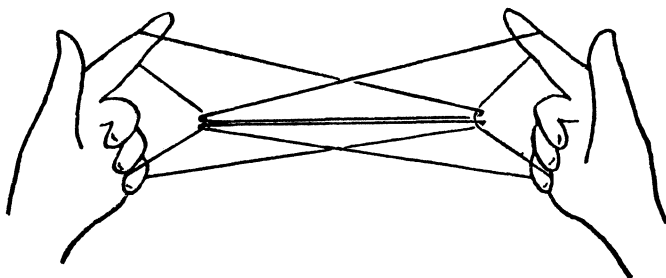


FIGURE 77.—String figure, *opae* (shrimp), made on Oahu.

U

1. Position 1. Turn hands so that palms are away and thumbs close to former ulnar little finger string. Pass thumbs over this string, down, toward body under both strings and up, at same time bringing hands back to position with palms toward each other.
2. Opening A.
3. Pass thumbs proximal side of index strings and from proximal side into little finger loop, then around the ulnar little finger string and back on proximal side of all strings to position.

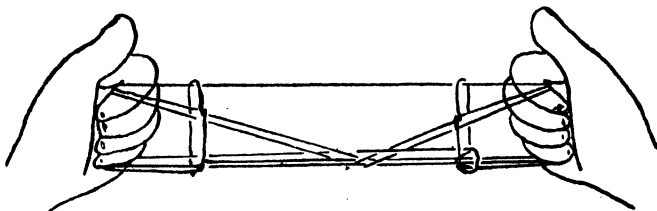


FIGURE 78.—String figure, *u* (breast), made on Oahu.

4. Pass thumbs distal side of index strings and pick up radial little finger strings.
5. Pass little fingers distal side of index strings and pick up ulnar thumb strings.
6. Pass indexes down into index loop toward center from the distal palmar strings and between palm and the proximal palmar string.
7. Release thumbs and little fingers; insert little fingers from proximal side into index loops and extend, separating indexes widely from little fingers. (See fig. 78.)

## HALE O KAEO

1. Position 1. Turn hands so that palms are away and thumbs close to former ulnar little finger string. Pass thumbs over this string, down, toward body under both strings and up, at same time bringing hands back to position with palms toward each other.
2. Thumbs pick up radial little finger string.
3. Little fingers pick up ulnar thumb string.
4. Opening A.
5. Pass thumbs from distal side into index loops, toward body under thumb loop and up.

Kaeo is said to be a king who became a servant, and made a smoky fire. (See fig. 79.)

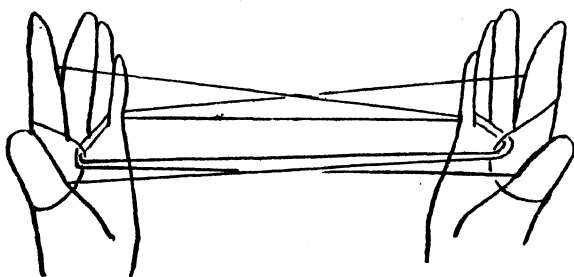


FIGURE 79.—String figure, *hale o Kaeo* (house of Kaeo), made on Kauai.

## OKOLE-AMO A OR HEE-HOLUA

The figure *okole-amo* is the first of three figures much alike and of the same name.

1. Position 1. Turn hands so that palms are away and thumbs are brought close to former ulnar little finger string. Pass thumbs over this

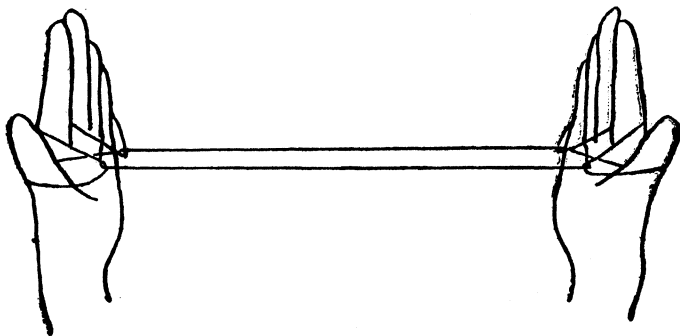


FIGURE 80.—String figure, *okole-amo* (twitching anus) or *hee holua* (sledding), made on Oahu, Hawaii, and Kauai.

string, down, toward body under both strings and up, at same time bringing hands back to position with palms toward each other.

2. Thumbs pick up radial little finger string.
3. Little fingers pick up ulnar thumb string.
4. Each index picks the further palmar string of the three of its hand.
5. Release thumbs and little fingers from the strings that pass from hand to hand.

Bring thumbs and indexes together then apart and keep up the sawing motion and say :

Hele kaua i ka hee-holua.  
Ina kaua. Holua, holua.

Let us go sledding.  
Forward. Slide. Slide.

(See fig. 80.)

#### OKOLE-AMO B

1. Hold string on thumbs. Little fingers pick up both thumb strings. Hold so that radial thumb string becomes the distal ulnar little finger string.
2. Thumbs pick up distal ulnar little finger string.
3. Pass indexes from distal side into thumb loops and pick up the thumb string furthest from palm.

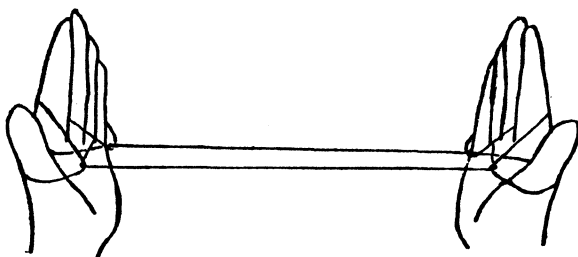


FIGURE 81.—String figure, *okole-amo* (twitching anus), made on Oahu.

4. Release the radial thumb string that runs from thumb to thumb and the ulnar little finger string that runs from little finger to little finger.
5. By moving thumb and finger of each hand to and from each other make sawing motion. (See fig. 81.)

#### OKOLE-AMO C

Another form of *okole-amo* is made in New Zealand and called *toemi* (a net) (1, vol. 3, p. 88; 2, p. 12) and in Marquesas Islands as *popo tikaue* (cluster of flies) (15, p. 44). It is not as common in Hawaii as *okole-amo* A.

1. Position 1. Indexes pick up ulnar little finger string.

2. Pass each thumb distal side of radial index string and pick up the string that runs from little finger string to index of the same hand.

3. Navaho thumbs.

Put thumb, index and little finger together, then separate, repeating this motion. (See fig. 82.)

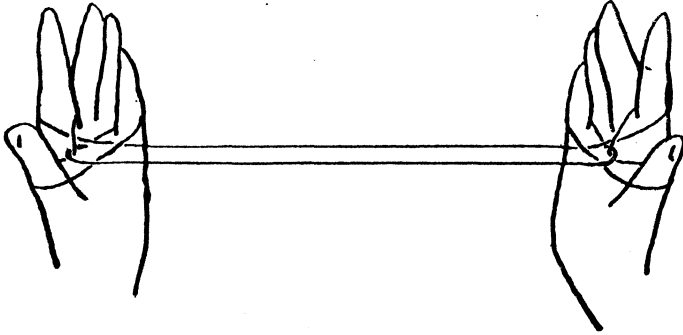


FIGURE 82.—String figure, *okole-amu* (twitching anus), made on Oahu.

### LOLI

The chant of *loli* compares the root of the taro to the sea slug.

1. Position 1, but with string crossed in center.
2. Opening A.

E loli, e loli e.  
Na hua kalo.

O, sea slug, O sea slug,  
Taro roots.

(See fig. 83.)

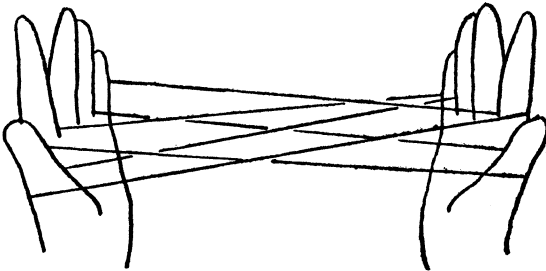


FIGURE 83.—String figure, *loli* (sea slug), made on Hawaii and Kauai.

### AI PILI-WALE A

To *pili-wale* is to attach oneself to a person for the sake of a living—the rations are likely to be scant.

1. Position 1. Twist loop by passing right thumb and little finger distal side of radial thumb string, then around it, and back to position. The former



radial thumb string becomes a left ulnar little finger string and the former ulnar little finger string becomes a radial right thumb string.

2. Opening A.

3. Release little fingers. Pass little fingers from proximal side into index loops and hook down radial index string on palms.

4. Pass ring fingers from proximal side through index loops, then from distal side into thumb loops and hook down the ulnar thumb string on palms.

5. Pass indexes distal side of radial thumb string, around it and back

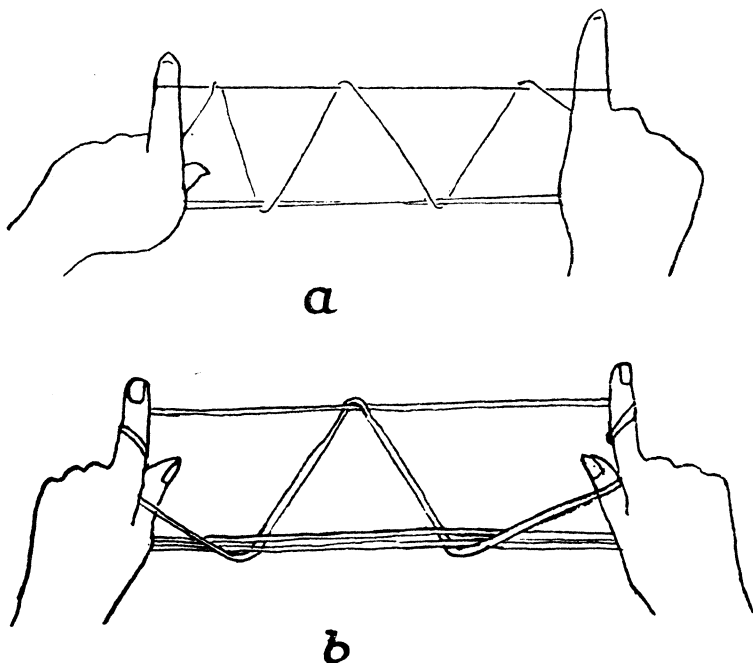


FIGURE 84.—String figure: *a*, *ai piliwale* (scant rations), made on Oahu; *b*, *ai holei* (generous rations), a continuation of *a*.

through index loop, the ulnar index string slipping off. Extend, backs of hands toward body, indexes high.

This is *ai pili-wale* (scanty rations). (See fig. 84, *a*.)

6. Reverse movement 5, indexes in making the reverse movement picking up the former ulnar index string again and holding it near the tip of indexes. Extend as before.

This is *ai holei* A (generous rations). (See fig. 84, *b*.)

Though the figure is different and differently made, the general appearance of both stages and the change from one to the other and back again are

strongly suggestive of the South Australian figure *ekeli* (water rat) (13, p. 126, no. 4).

### PAI

In the ancient gambling game *puhenehene* a player hid a small stone under one of five piles of tapa, the opposite players watching the muscles of his arm and his face to discover when he let go of the stone. Then one of the players struck one of the piles of tapa with a rod having a tuft of feathers

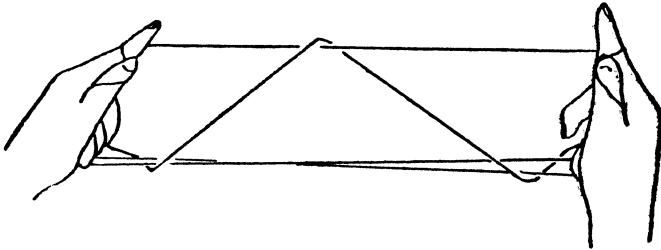


FIGURE 85.—String figure, *pai* (strike), made on Hawaii, Oahu, and Niihau.

at one end, called *maile*, winning if the stone was under the tapa which was struck. The *maile* is also a vine, which makes a pun in the last chant.

1. Position 1. Make one complete twist in the string by passing right thumb and little finger distal to ulnar little finger string, down, toward body under both strings, and up.

2. Slap hands together and say *pa'i* (strike).

3. While hands are close together hook left palmar string with right little finger from distal side and draw to right.

Hook left little finger over left radial little finger string and left ulnar thumb string while drawing hands apart and at same time pick up radial thumb string with indexes and extend, holding hands with backs toward body, indexes high (fig. 85), saying while extending:

I ka hua o ka maile.

The fruit of the maile.

or

Kau wahi, ka manini.

Your place—the fish.

### AI HOLEI B, OR V

This figure is like *ai pili-wale* (p. 120), upside down, with the two stages reversed in order. The modern names for the stages are “M” and “V” and the old Hawaiian names are unknown by most who make the figures.

1. Position 1. Make a complete twist by passing right thumb and little finger distal to ulnar little finger string, down, toward body under both strings and up.

2. Opening A.
3. Release little fingers. Pass indexes from distal side into thumb loops, and extend, turning indexes away and up and hands with palms turned away. This makes *ai holei* (generous rations) or "V." (See fig. 86, *a*.)

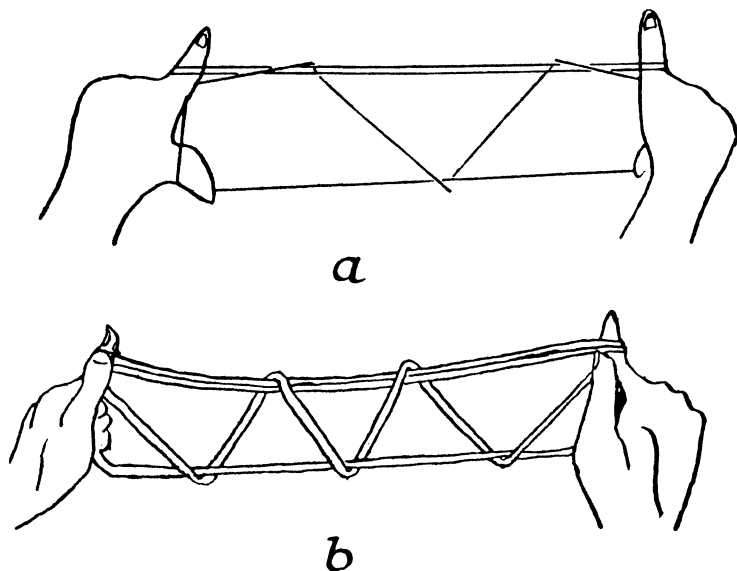


FIGURE 86.—String figures: *a*, *ai holei* (generous rations), made on Kauai; *b*, *ai pili-wale* (scant rations), a continuation of *a*.

4. Pass little fingers from distal side into index loops and hold down ulnar index string.
  5. Slack thumbs and raise indexes, until figure appears. This is *ai pili-wale* B (scant rations) or "M." (See fig. 86, *b*.)
- By releasing little fingers and then repeating movements 3 and 4 these two figures can be repeated at pleasure.

#### KA-NAIO

1. Position 1. Twist right loop by passing right thumb and little finger over ulnar little finger string, down, toward body under both strings and up.
2. Opening A.
3. Pass thumbs distal side of index strings and pick up radial little finger string.
4. Pass thumbs from proximal side into index loops between palmar strings and indexes.
5. Release thumbs from the radial thumb strings that lead from each

thumb to ulnar side of opposite index. This is easily done by pointing thumbs toward each other, then passing them around the string to be released so that it drops off.

6. Pass each index down into the triangle formed by a loop around a thumb loop with apex in the string that runs from the index to thumb of same hand. Release little fingers and extend, turning indexes away under strings.

7. Pass little fingers proximal side of intervening strings, distal side of the radial thumb string that is a straight string from thumb to thumb and pull this string down on palms.

8. Bend indexes so that each index holds on palm the string from that index to thumb of same hand. Substitute middle fingers for indexes.

9. Pass indexes from distal side into thumb loops close to thumbs and pick up radial thumb string and release thumbs from this string.

10. Insert left index and its loop from proximal side into left thumb loop and release left thumb leaving its loop as the proximal left index loop.

11. Pass left thumb from distal side into distal left index loop and pick it up, releasing it from left index.

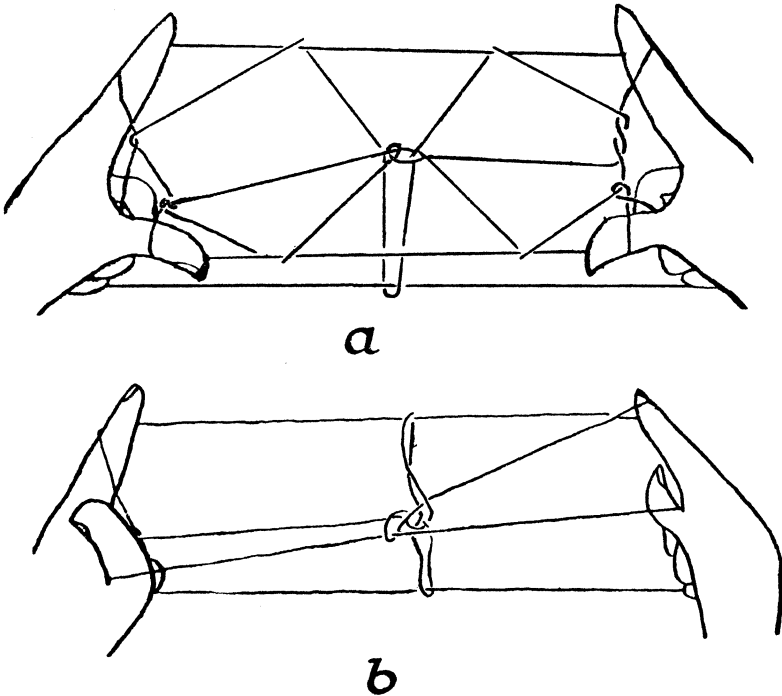


FIGURE 87.—String figures: *a*, *ka-naio* made on Kauai and Niihau; *b*, *malo-pua-ula* (red-flower loin cloth), a continuation of *a*.

12. Let left index loop fall from left index upon left middle finger loop. As the left middle finger is bent down, the index loop falls upon the proximal side of left middle finger loop.

13. With right thumb and index lift left middle finger loop and release left middle finger. Then from below with back of left index, draw the loop just dropped from left index through the loop held by right thumb and index. Right thumb and index then release the loop held by them. There should now be a straight ulnar index string from index to index.

14. Pass right middle finger and its loop from proximal side through right thumb loop. With left thumb and index pick up right middle finger loop and withdraw right middle finger.

15. A string runs from ulnar side of right thumb to radial side of left thumb across the loop held by left thumb and finger. Release right thumb, then from below pass right thumb through the loop held by left thumb and index and pick up this string with back of right thumb and draw it through the loop held by right thumb and index which now release the loop held by them.

Extend, holding palms toward each other, little fingers bent on palms, thumbs pointing up and toward body, and indexes up and away. (See fig. 87, a.)

O Ka-naio, O Ka-naio.  
O ka lua a Kane,  
I haki a'e la i ka makani Hakalau.  
Lewa lu nanai o kahi i kau ai o ka malo  
o pua-ula.

Oh, *naio* tree, Oh, *naio* tree.  
Oh, the destruction by Kane  
Shattered in the Hakalau wind,  
Swinging, scattered, stripped, where  
hangs the red-flower malo.

The *naio* is the bastard sandalwood tree. The red-flower *malo* is one made of red tapa, worn only by chiefs.

16. Two strings running from center of figure to radial thumb string make a blunt triangle, the base of which is the radial thumb string. Similarly, two strings which run from center of figure to ulnar index string make a triangle the base of which is the ulnar index string.

Release right thumb and pass it from proximal side (from below) into the first of these triangles. Release left index and pass it from proximal side (from below) into the second triangle. Extend, holding hands as before. (See fig. 87, b.)

This is:

Kahi i kau ai ka malo pua-ula.

Place where hangs the red flower loin-cloth.

## NINE EYES

1. Position 1. Put loops on each thumb and little finger by taking a turn around each little finger with ulnar little finger string and a turn around each thumb with radial thumb string.
2. With each index pick up palmar loop of little finger of other hand.
3. With each ring finger pick up palmar thumb loop of other hand.  
(See fig. 88.)

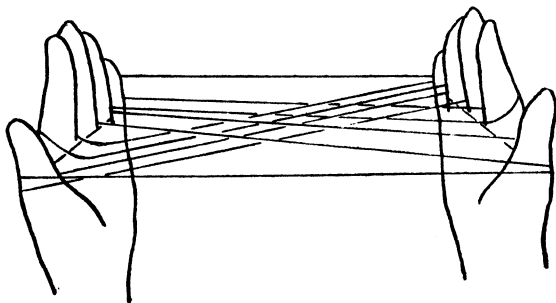
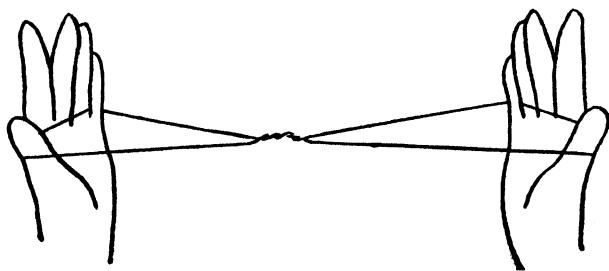


FIGURE 88.—String figure, "nine eyes," made on Oahu.

## UWENE B

The figure *uwene* is made by old women while quieting fretting babies.

1. Position 1. Twist loop three times by passing right thumb and little finger over ulnar little finger string, down, toward body under both strings and up, three times.

FIGURE 89.—String figure, *uwene* (flatus ventris), made on Kauai.

2. Move both thumbs toward right, then toward left, and so on, thus moving the twisted strings in center (fig. 89), while saying:

Uwene, uwene,  
Uha e le'ale'a.

Gently, gently,  
Happy thighs.

# HAIKU B

The figure Haiku pictures a highly symbolic tale of love.

1. Use short string or doubled string. Hold strings on thumbs and indexes. Close middle, ring, and little fingers over all strings that pass between hands, hold them down to palms and bring hands near each other, the thumbs and indexes of one hand pointing toward those of the other.

2. Make following two movements simultaneously: pass left index toward right, over the right thumb-index dorsal string, then under it from right to left and pull it toward left; pass right thumb toward left, over the left thumb-index dorsal string, then under it from left to right and pull it toward right.

3. Make following movements simultaneously: turn left index toward body and up; turn right thumb away from body and up.

4. Release left thumb; then, turning toward left, lift on its back the string which passes from left middle finger to left index strings.

5. Pass left index down and toward body under the string that passes from the right thumb to the left middle finger and left palm and pick up this string with ball of left index and pull it through left index loop, entering the loop from the distal side, it thus becoming a new index loop while the former index loop slips off left index. Straighten up left index.

6. Release left thumb. With back of left thumb pick up the near string of the triangle near left index. This string runs from radial left index string to the string just released from left thumb, the former radial left thumb string.

7. Close right index on the string that runs from radial thumb string near middle of figure to right little finger (on palmar side of the four fingers of right hand) and hold it down on right palm. Release right middle, ring, and little fingers and then substitute right little finger for right index.

Close left middle finger on the radial left index string at a point further from the left index than where it is crossed by the ulnar left thumb string and hold it down on left palm. Release left ring and little fingers and then substitute left little finger for left middle finger.

8. Pass left middle finger (or middle and ring fingers) from proximal side into left index loop and then toward body over ulnar left thumb string, and hook it down on left palm. Pass right ring and middle fingers from proximal side into right thumb loop and hook down the radial right thumb string on right palm.

9. Pass left index toward body over (distal side of) radial left thumb string, around this string and back, picking it up, it becoming an index string while the former left index string slips off. Release left thumb, middle and ring fingers. Pass right index from proximal side into right thumb

loop, then from proximal side into little finger loop and around radial little finger string, picking it up and carrying it back through right thumb loop. Release right thumb and middle fingers. Extend, indexes high, little fingers low and pointing toward body. (See fig. 90, a.)

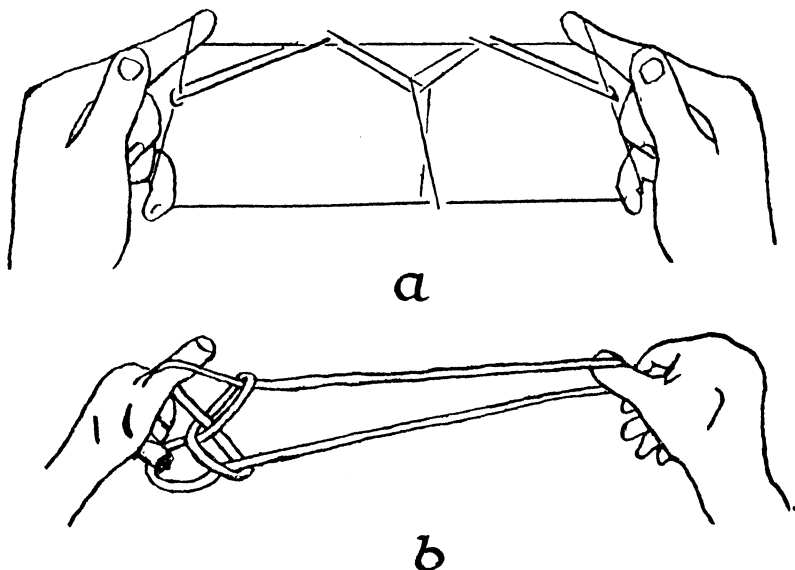


FIGURE 90.—String figures: *a*, "Haiku," *Kane ulukoa* (Kane, creator), "Palila," or *na kui-hele* (short steps), made on all Hawaiian islands; *b*, *kane-opa* (lame man), a continuation of *a*, made on all Hawaiian islands.

This figure looks slightly like a bird. Rock it gently by moving hands alternately up and down and chant:

Ka awa lau-lena o Hana;  
O ka makani lau-ahanahana o Kua-lana-  
kila;

Ka pae hala i ke kai o Nu'alele;  
Ku oili, ke lele wale nei e.  
Hele, hele ke aloha i Ha'iku.  
Eia la eia.

Aniani mai kona aloha  
Maluna mai o Awilipua.  
Hele i kai o Kape'a,

Kai pii wale i ka pali;  
Kai auau a ka mea aloha;  
Kona aloha ka-lawalawa,  
Oni ana i ka manawa me he puhi 'la.  
Ke iho la ka iho kahakai,  
Ka iho pali lalo o Hakalau.

The yellow leaf awa (valuable) of Hana;  
The warm lau-ahanahana wind of Kua-  
lanakila;

The hala grove of the sea of Nualele;  
Strong emotion arises, and flies away.  
The lover went to Haiku;  
There, just there,

His love was wafted to him  
From above Awilipua (twined flowers)  
She went to the sea of Kapea (connubial  
bliss?)

The sea softly washing against the cliff;  
Sea where his loved one bathed,  
His true love,  
Twisting in her emotion like an eel.  
He went down to the beach,  
The steep cliff below Hakalau.



Hoau ka opeope i Waimalino	Floating his bundled clothes to Waimalino (Smooth water)
Ku-ululu ka hulu o ka manu i ka ua pehi mai ka pali.	Soaked and chilled are the bird's feathers in the rain pelting down at the cliff. (He grew tired of his love and de- serted her?)

This is a popular chant, widely known, with many minor variations. The following ending is not so common.

10. Pass left thumb away into the triangle on the ulnar side of the index string. Release indexes and extend.

O kane-opa	O, lame man,
Ke ne'ene'e i kahakai.	Limping to the beach
Me ka hu'ahu'a, me ka alaala,	With a squid's head, squid bait (that is, disappointment, no fish)
Paina poha.	Snap. Crack.

This ending of the chant means "all love comes to naught, disappointment." (See fig. 90, b.)

#### KANE ULUKOA

The figure *Kane ulukoa* is made on Hawaii. It is the same as Haiku B, without the continuation.

Kane uluko'a, hooulu wehiwehi olalo.	Kane, creator of the coral and the ver- dant lowlands (god of land and sea).
Kuu kane lau-ki i kahaia e ka makani.	My husband, now a ti-leaf, torn by the winds.
Pa kahea ka wahine o Koolau, "E, ua ino Koolau."	A voice is heard, the woman of Koolau: "It storms in Koolau."

The husband is first like the god Kane, then either dead or estranged, under the figure of the torn ti leaf. "The woman of Koolau" is a storm wind.

#### PALILA B

The figure Palila B is the same figure as Haiku B and *Kane ulukoa*, with the chants of the different string figure named Palila A (p. 72).

#### NA KUIHELE

1-9. As in Haiku B (p. 127).

Sway hands alternately slightly up and down, saying:

Na ku'ihele, na ku'ihele,	Short steps, short steps,
I apa'apa'a, i apa'apa'a,	In strong wind, strong wind,
Na koa-lau-kani, na koa-lau-kani,	Whispering, whispering, like rustling koa leaves,

Na kunounou, na kunounou,  
Na hawele i hawelewele,  
Na ka paua òki hala o Kahuku.

Nodding, nodding,  
Beckoning here, beckoning there,  
For the shell knife that cuts the hala of  
Kahuku.

10. Release right index.

This makes *pali o Ke-e* (cliff of the call). (See fig. 91.)

This is the name of the cliff at Haena, Kauai, from which Hiiaka took Lohiau after bringing him to life (7, vol. 6, No. 2, p. 344).

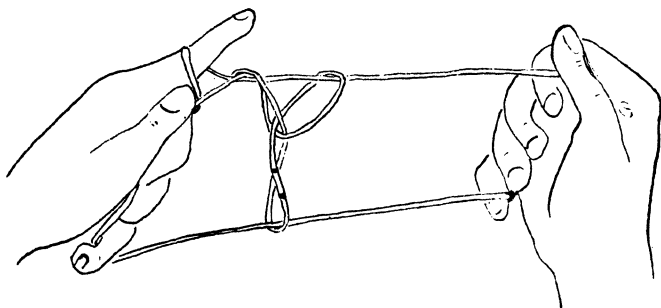


FIGURE 91.—String figure, *pali o Ke-e* (cliff Ke-e), a continuation of figure 90, *b*, made on Niihau.

11. Put left thumb into the triangle on ulnar side of radial string (on the left side of its radial loop). Release left index and extend.

This makes *ku ami*, a swaying movement of the hips in the hula dance. This is the same as Kane-opa (fig. 90, *b*).

#### KA-ILJO

The chant of this figure consists of puns on place names of Oahu.

1-9. Same as movements of Haiku B (p. 127). Same chant as *na kui-hele*, first five lines.

10. Release right little finger and insert it from proximal side into left little finger loop and push the loop that was around the radial right little finger string to the right to join the loop around left index strings and keep these two loops in place with left thumb and middle finger. These loops form the mouth of the dog which faces the right.

11. Lay figure on lap, keeping right index in its loop, without disturbing the mouth of the dog, except perhaps by pulling strings a little, improving its size and shape, disentangle the left portion of the figure so that there are two long loops leading to the left from the dog's head. Twist toward body the far loop by turning its far string (which is the ulnar right index string) under its near string. Then place this loop over the near loop and draw the near loop up through it and out to the left. Slip the portion of the former

far loop now about the near loop, to the right until it is near the dog's mouth. Then draw out to the left the ulnar right index string, making a new far loop and also drawing taut an upright loop near the dog's mouth, forming the front legs of the dog.

12. Repeat movement 11. This makes the hind legs of the dog.

13. Draw outward a small portion of the far string of the near long loop so as to make a small loop. Then turn the left string of this loop to the right over its right string and thread down through this the extremity

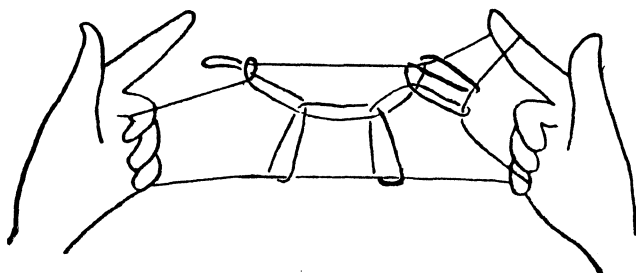


FIGURE 92.—String figure, *ka-ilio* (dog), a continuation of figure 90, *a*, made on Niihau.

of the far long loop (which is now probably not very long). This makes a half hitch about the extremity of the far loop, the extremity of the far loop making the tail of the dog. Draw near long loop taut so as to hold tail safely, insert fingers of left hand in near long loop, pick off lap and extend. (See fig. 92.)

Ke-kupua a Ki-holo Ka-huku  
Ma Ka-ilio i Ka-ohao e  
A luhi kaua i Ka-haena.

The demigod went to the knoll to shoot  
To a dog that was tied up  
And we were worn out by the barking.

#### PAE MAHU A

1. Hold string on thumbs, thumbs pointed up. Twist left thumb outward, down, inward, and up.
2. Pass little fingers from proximal side into thumb loops and hold down radial thumb string on palms.
3. Pass indexes from distal side into thumb loops and pick up radial thumb string. Release thumbs.
4. Pass thumbs from proximal side into index loops and extend.
5. Hold ring fingers on palms over thumb string. Bring hands near each other. Pass left thumb under the string that passes back of right thumb and index and lift it on back of left thumb. Release right thumb from this string and pass right thumb over it and under the string that passes back

of left thumb and index, picking up this string and taking it off of left thumb. Release indexes and ring fingers and extend. Thumbs high, little fingers bent on palms.

6. Pass indexes from distal side into thumb loops and then from proximal side into little finger loops and pick up radial little finger string and bring it back through thumb loops. Release thumbs. Pass ring fingers from proximal side into index loops and hold snug against little fingers.

7. Pass thumbs from proximal side into index loops. Release indexes.

8. Repeat movements 3, 4, and 5 with middle fingers taking the place of ring fingers.

9. Pass indexes from distal side into thumb loops and then from proximal side into ring finger loops and pick up the radial ring finger string and

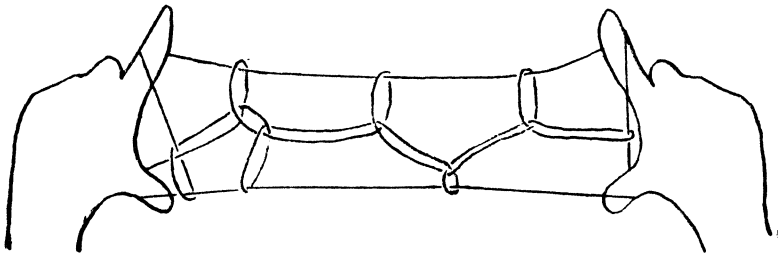


FIGURE 93.—String figure, *pae mahu* (hermaphrodites), made on Niihau.

bring it back through thumb loops. Release thumbs. Pass middle fingers from proximal side into index loops and hold snug against ring fingers.

10. Release ring fingers and substitute ring fingers for middle fingers and repeat movements 8 and 9.

11. Lay figure down, backs of hands to table. Release hands and pass right thumb and index down into the former little finger loops and left thumb and index down into the former index loops. Pick up and extend. (See fig. 93.)

"Pae mahu o Kauai nei.

Pae mahu o Kauai nei.

Hele mai nei au e hoomoe ia oe i ke kane."

"Heaha ke kane?"

"Kane eleele."

"Hermaphrodites, of Kauai,

Hermaphrodites, of Kauai.

I have come to marry you to a man."

"What man?"

"A dark man."

12. To disentangle, release left hand, still holding figure with right, and untangle from the left, saying:

"A make ia mahu."

That one is dead.

as each loop is untangled. Adding, "This one went farming, fishing," and the like, as each one is killed.

## PAE MAHU B

This *pae mahu* figure is made in Palau, Caroline Islands, as *ardslep a Ngiwal* (ghosts of Ngiwal) (25, vol. 6, p. 52) and in Marquesas Islands as *amahu*, *pua'a haapito*, and *pua'a vaevae van* (pig with eight legs) (15, p. 22). In the Marquesas Islands a different method is adopted of reaching the point made by movements 1-4.

1. Hold string on thumbs. Twist right thumb loop by passing right thumb away, down, toward body under both strings, and up.

2. Pass right thumb from proximal side into left thumb loop and release left thumb. Hold right thumb horizontal, pointing to left with the two loops hanging from it.

3. Point fingers of left hand outward and pass left middle, ring, and little fingers from distal side into distal right thumb loop and then outward between distal and proximal right thumb strings. Pass left index from proximal side into proximal right thumb loop, then outward between the distal and proximal right thumb strings.

4. Release right thumb and place left hand on lap or table, palm down, fingers away; and stretch left index loop out to right of left hand and left middle-ring-little finger loop out to left of left hand. Make them equal in length.

5. With right hand pull a portion of dorsal string of long right loop toward tips of fingers of left hand, forming a loop. Then twist this loop by passing its radial string dorsal to its ulnar string. Repeat this twist and place without further twisting over left little finger. Pull right hand loop until taut. There should now be a dorsal string across left little, ring, and middle fingers and the dorsal string of right long loop should emerge from between the left little and ring fingers proximal side of this first mentioned dorsal string.

6. Pass right thumb and index from distal side into the left little finger loop, pick up the dorsal string of the long left hand loop, pull it through little finger loop and stretch it out again to the left.

7. With right hand pull a portion of dorsal string of the long left hand loop toward tips of left little finger, forming a loop, then twist this loop by passing its ulnar string dorsal to its radial string. Repeat this twist and place the loop over left index without further twisting. Pull long left hand loop until taut.

8. Pass right thumb and index from distal side into left index loop, pick up the dorsal string of the long right hand loop, pull it through left index loop and stretch it out again to the right.

9. Repeat movements 5-9 until the long loops are about used up. In

repeating movements 6 and 8 reach only through the distal left index and little finger strings to pick up long strings.

10. Pass right thumb from distal side into remains of right long loop and right index from distal side into remains of left long loop and slip all strings off left hand except left middle and ring fingers, at the same time pointing middle and ring fingers of left hand down.

11. Pass left thumb and index from distal side into left middle and ring fingers loop, releasing left middle and ring fingers and extend.

There will be a large number of loops around ulnar index and radial thumb strings which must be separated and pushed to the left. It will be

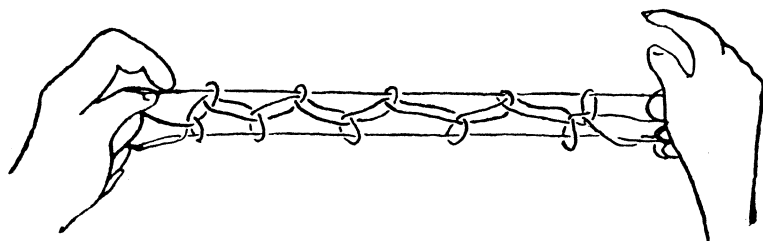


FIGURE 94.—String figure, *pae mahu* (hermaphrodites), made on Niihau.

well to place either left index through the nearest loop on ulnar index string or left thumb through nearest loop on left radial thumb string to hold figure extended. (See fig. 94.)

To disentangle, release right hand and disentangle the right end of figure first, gradually working to left.

#### PAE MAHU C, OR KOKO O MAKALII

1. Hold string on thumb and index of each hand.
2. Pass left thumb distal side of ulnar index string, then pass left thumb and index down, toward body under both strings, and up.
3. Pass right index to left between left thumb and index on distal side of left thumb-index dorsal string and pick it up with ball of right index and pull it to the right, turning right index away and up and releasing left index.
4. Pass left index from proximal side into left thumb loop.
5. Repeat movements 2-5 a number of times, finally ending with movement 3.
6. With left thumb and index pick loops off right index and hold them, keeping in mind which side of these loops was the distal side. Put right ring and little fingers from proximal side into right thumb loop and release

right thumb. Then with right thumb and index take former right index loops from the left thumb and index.

7. Pass end of the loop held by left thumb through the loops formerly on right index from the former distal side of these loops and over right index and middle fingers so that the radial left thumb string becomes an ulnar middle finger string and the ulnar left thumb string becomes a radial right index string. (Right hand held palm toward body and horizontal.)

8. This movement makes at the left of the figure two long loops of the former left thumb string. Put all fingers of the left hand toward body through these loops so that the left index passes from proximal side through the left extension of the right index-middle finger loop and the left middle, ring and little fingers through both loops. Hold hands with palms towards body and pointing toward each other. There will be two ulnar left little finger strings of which one is an ulnar right little finger string; one radial left middle finger string which is the same as the ulnar right middle finger string and one radial index string.

9. Slide toward the left the loops that are around the radial index string and they will form a series of heads from each of which two legs spread out. The index and middle fingers must be held well apart. (See fig. 95.)

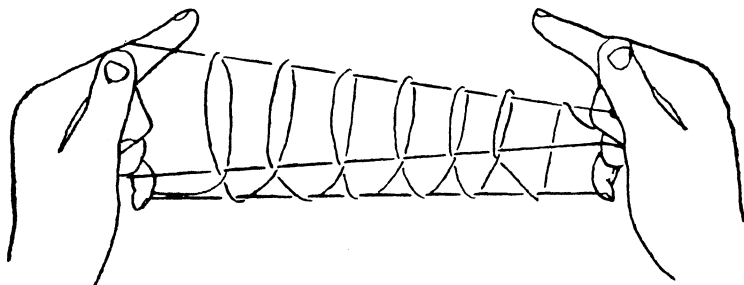


FIGURE 95.—String figure, *pae mahu* (hermaphrodites), *koko o Makali'i* (calabash net of Makali'i), made on Oahu and Niihau.

10. To disentangle, release right index and middle finger and kill the *mahu* one by one beginning at the right by chopping off the heads (sliding off the loops).

## M

The figure "M" is made in the Ellice and Tokelau islands by different but allied movements (17, p. 77). It undoubtedly came to Hawaii from the Gilbert Islands as it was recognized by Gilbert Island natives. It is very different in movement from other Hawaiian figures. Its opening, which occurs in no other Hawaiian figure, is practically the same as one (the

"bow" opening) that appears in six Navajo Indian figures (18, pp. 212-230) and in one figure in the Gold Coast (10, p. 283).

1. Hang string over left hand, palm up, fingers pointing to right. With right hand pass radial string once around left hand. There are two loops about the left hand, one short, one long.

2. Bend left hand so that fingers point up. Insert right index from proximal side into both loops so that the two indexes are back to back, and right middle, ring, and little fingers from proximal side into long loop, back to back with corresponding fingers of left hand but with the right hand string of the short loop between them. Withdraw left middle, ring, and little fingers from the short loop.

3. All fingers are pointing toward body, those of one hand back to back with the corresponding fingers of the other. Twist indexes down, around ulnar index (the pendant short loop), away and up. At the same time withdraw the other fingers from the long loop and pass thumbs from distal side into the long loop, following the middle, ring, and little fingers as they

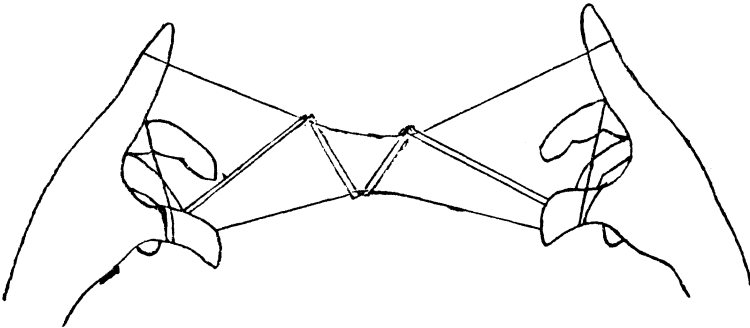


FIGURE 96.—String figure, "M," made on Oahu.

withdraw and turning them up on the radial side of the strings held by indexes. Extend. The radial index string runs straight from index to index on distal side of the ulnar index strings, each of which runs to thumb of other hand over the ulnar thumb string which is a straight string from thumb to thumb.

4. Pass little fingers from proximal side into index loop and hook down radial index string to palms. Do not allow this string to slip during remaining movements.

5. With backs of thumbs pick up ulnar index string and release indexes.

6. Pass indexes from distal side into thumb loops and pick up ulnar thumb string and return. Extend, holding indexes high and pointing away, thumbs low and pointed toward body (but not pointed down). (See fig. 96.)



X

1. Put both hands through loop and extend, so that the string is held on wrists. Take a turn with ulnar string about each wrist. This may be done by turning hands away, round ulnar string, and up through the loop.
2. Pick up palmar strings as in Opening A. This is the familiar cat's cradle, as usually made on the wrists by Chinese and Japanese.
3. Close middle, ring and little fingers of each hand on palm between

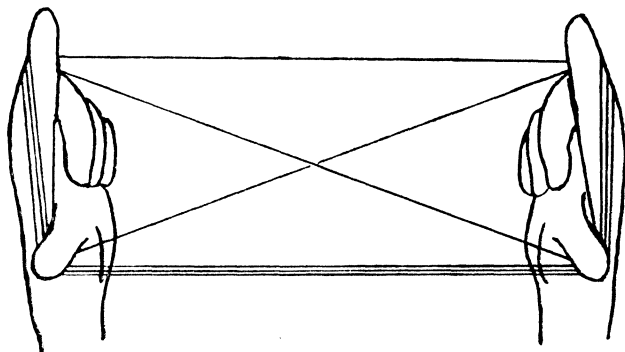


FIGURE 97.—String figure, "X," made on Kauai.

ulnar wrist strings and ulnar index string. This is done to get these fingers out of the way during the next movement.

4. Without dropping index loops, pass indexes and thumbs toward body over radial wrist strings, down, outward under all strings and up. In thus revolving the hands all the wrist strings become thumb and index strings.

Extend, hands held with palms toward each other, indexes pointing away from the body. (See fig. 97.)

CAT'S CRADLE SOLITAIRE

All the usual cat's cradle figures except "manger" and "fish in a dish" can be made by one player. "Cat's cradle solitaire" is made in Hawaii only by school children and comes perhaps from Japan.

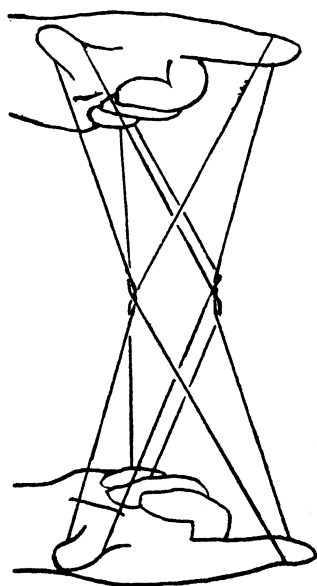
1. String held on backs of hands. Take one turn around each hand with radial string. This can be done easily by grasping the radial string with the four fingers of each hand and turning the fingers around it and up between the two long strings. Opening A with middle fingers. This makes the familiar "cat's cradle" (18, p. 325).

2. Pass thumbs proximal to proximal radial index string (the straight string from hand to hand), then distal to distal radial index string and from proximal side into middle finger loops. Release middle fingers.

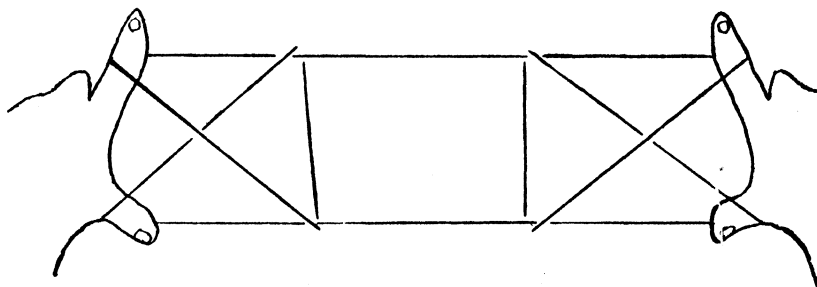
3. Pass middle, ring, and little fingers proximal to the two ulnar little finger strings and pick them up—that is, release these fingers from the two dorsal strings leaving them held by the indexes only. This makes "soldier's bed" (18, p. 325). (See fig. 74.)

4. Release left hand from all strings. Pass left thumb from proximal side into right thumb loop and left index from proximal side into left index loop and extend. This makes "candles" (18, p. 326).

5. Pass little fingers from proximal side into index loops then with them pick up ulnar thumb string. Release thumbs.



a



b

FIGURE 98.—String figures: a, "hour glass," made on Oahu and Kauai, a continuation of cat's cradle; b, "looking-glass," made on Oahu and Kauai, a continuation of cat's cradle.

6. Pass thumbs proximal to the proximal radial index string (the straight string from index to index), distal to the distal radial index string and proximal to and pick up the radial little finger string. Release little fingers.

7. Pass indexes distal over radial index string and hold it to palms, slipping off indexes the ulnar index string that is free to be slipped off. Then return indexes to position.

8. Indexes pick up the ulnar thumb string that is a straight string from thumb to thumb. This makes the "soldier's bed" again and omits the figure "manger."

9. Pass little fingers from proximal side into index loops, then in an ulnar direction distal to the ulnar index string that is not a straight string from index to index, then proximal to the ulnar index string that is a straight string from index to index, then in a radial direction distal to this string and the radial index string, then proximal to and pick up the ulnar thumb string. Release thumbs. This makes "cat's eye" (18, p. 332.)

10. Turn hands so that palms are toward each other and fingers point down. Pass thumbs from proximal side into little finger loops. Then pass thumbs and indexes from distal side of figure into central diamond and partially extend gently. Release little fingers. This will let fall from each palm a palmar string which makes a loop from palm to center of side strings of figure. Pass each little finger from distal side into the one of these loops nearest it as it falls from the palm. Extend. This makes "hour-glass." (Tip figure to one side to make hourglass upright.) (See fig. 98.)

11. Release little fingers and extend. This makes "looking glass" (fig. 98, b).

#### LEHO

1. String on left thumb and index, long loop hanging down on palm of left hand.

2. Pass right hand from proximal side into long loop, take hold of the dorsal left thumb-index string and pull it out full length.

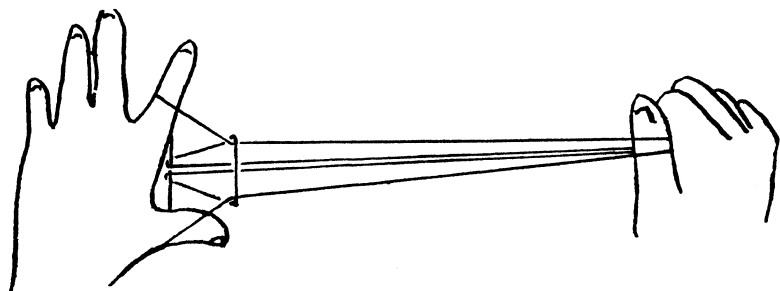


FIGURE 99.—String figure, *leho* (*Cypraea*), made on Oahu.

3. Release right hand. Pass right hand from proximal side through long loop; then pass right index from distal side into left index loop then from proximal side into left thumb loop and pull the ulnar left thumb string and the radial left index string through long loop and out to right to full extent.

4. Put middle, ring, and little fingers from proximal side into right index loops. Close right hand and twist it to right and left. (See fig. 99.)

Auheā wale oe ka leho,  
Ka mea hoopau pilikia.

Hail, Cypraea,  
Who ends troubles.

This figure is made by the inland Eskimos as "a pot boiling," also by the Eskimos of Mackenzie Delta and Coronation Gulf (19, p. 165, B). It is the reverse of the next figure, *pahiolo*, and has the same arrangement of strings as "lighthouse" (fig. 7, *b*), which is made on toe and hands.

Similar figures but with different construction are: "gude tree," Rhodesia, made on two toes and thumbs (21, p. 221) and *wasifobodi*, Goodenough Island, Papua, made on toe, little finger, and right hand (20, p. 312).

#### PAHILOLO A

1. String on left hand in Position 1. Long loop hangs down.
2. With right hand pull out left hand palmar string to full extent and drop it.
3. Repeat movement 2.
4. Put right hand from distal side through long loop. Pass right little finger under the ulnar hanging string and from distal side into left little finger loop. At same time pass right index under radial hanging string and from distal side into left thumb loop. With these fingers draw

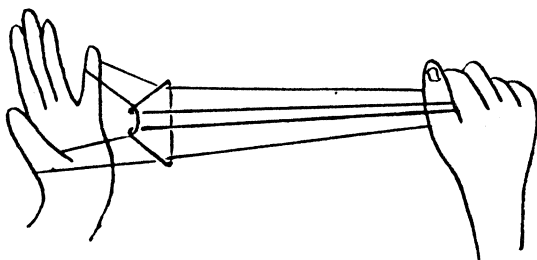


FIGURE 100.—String figure, *pahiolo* (saw), made on Hawaii.

the radial left thumb string and ulnar left little finger string through the long loop and out to full extent.

5. Substitute right thumb for right index, put all right fingers into right little finger loop, then from distal side into right thumb loop and close

right hand on strings. Then by rocking hand, with strings held taut, the triangle near left hand opens and shuts. (See fig. 100.)

Pahiolo la e,  
Hole, hole e,  
Hole la, hole lua.

Saw away,  
Saw, saw on,  
Saw away, saw deep.

The figure *pahiolo* is made by the Yöruba of West Africa (24, p. 135); on the Gold Coast, Africa, as "the skin bellows" (10, p. 296), and in the Society Islands as *taata ino* (bad man) (15, p. 84). It is made by the Eskimos on the back of the hand by an entirely different method (19, p. 163).

This figure is the reverse of *leho* (fig. 99).

#### BROOM

1-4. Make movements 1-4 of *pahiolo* (p. 140).

5. Pass right hand with its loops over left hand putting at same time the left index from proximal side into the right index loop and the left ring finger from proximal side into the right little finger loop. Draw these loops

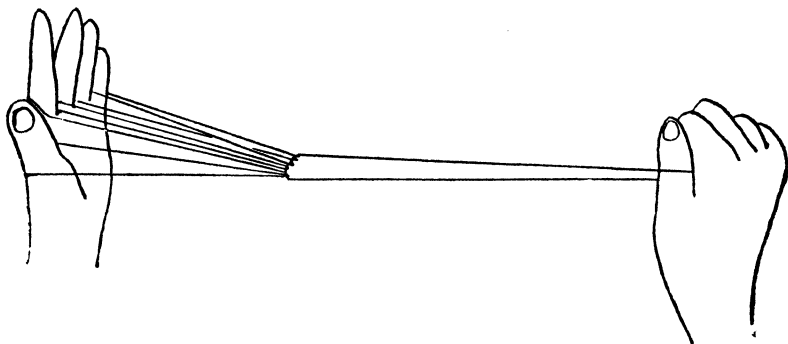


FIGURE 101.—String figure, "broom," made on Kauai.

out back of left hand to full extent and let them fall and hang down back of left hand, releasing right hand.

6. Hold left hand palm up and with right hand take hold of outer left palm string and pull gently up until the broom is made. (See fig. 101.)

#### WINKING EYE

1. Hang string on left index; long loop hanging down palm of left hand.

2. With right hand take one turn around left index with the ulnar string of the long loop, then pass the string between left index and left thumb, then on dorsal side of left thumb and to front, so that it becomes a radial left thumb string.

3. Pass left thumb from proximal side into the distal left index loop and extend.

4. Pass ulnar string of long loop between left thumb and index and around thumb to front again.

5. Lift proximal string of long loop over thumb to palmar side of thumb.

Pulling and relaxing on long loop in a radial direction (that is, in a straight line with the left thumb and index) will make the eye wink. (See fig. 102.)

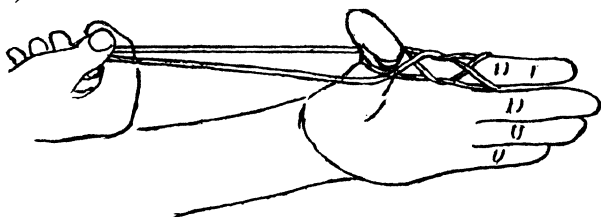


FIGURE 102.—String figure, "winking eye," made on Kauai.

#### UMEKE AI O HINA OR HALE AHAMAKA OLE

1. Put loop on big toe and make one turn around toe with right hand string.

2. Put both hands into long loop from below; over the side strings of

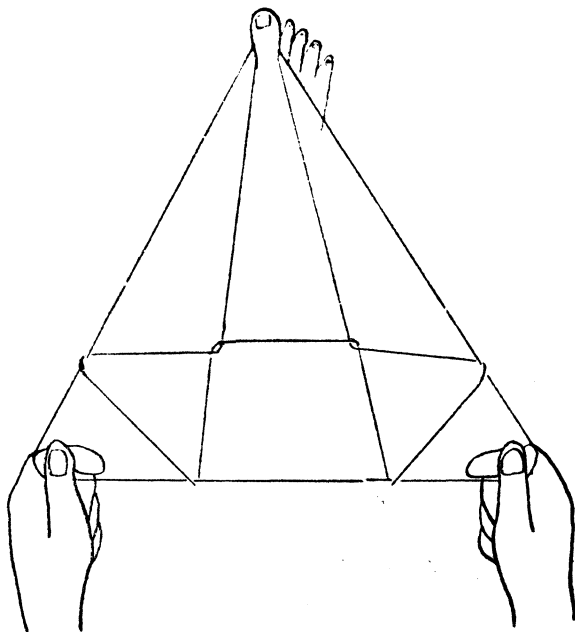


FIGURE 103.—String figure, *umeke ai o Hina* (poi calabash of Hina), or *hale ahamaka ole* (house without a hammock), made on Kauai and Niihau.

the loop; down; toward the body and up on the near side of the near end of the loop.

3. With both hands pull out toe dorsal string, slip wrist loops off wrists and let them fall upon the string held in the hands. (See fig. 103.)

Owau no o Hina.

Oluna, olalo;

Me ka akau a i ka hema;

Umeke o Hina.

I belong to Hina.

Above, below,

North to south,

Calabash of Hina.

An *ahamaka* was a piece of tapa hung by two ends from a pole.

#### HANA KA ULUNA

The figure *hana ka uluna* (prepare the pillow) is made on Hawaii.

This figure, unlike all the others of this collection, was not made for fun, but was used by a priest, called to heal the sick, in a serious attempt to learn whether the gods of the sick would answer his prayer. If the chain and knot did not come undone smoothly the augury was bad and the sick one would die unless a different priest was employed, and proceedings for healing renewed from the beginning, and finished successfully.

First, if preliminary omens had been favorable, the priest in presence of the sick one offered this prayer:

O hana ka uluna.

Ka paka a ka ua i ka lani.

Hana no e oki.

Ka hana kapu a Lono.

"E, Lono e,

Eia kou pulapula la, ua ma'i.

A e Lono e,

E lawe i ka eha o ka ma'i a pau

I na pilikia o ia nei.

Kahiki-ku, Kahiki-moe, Kahiki-papaua a Kane,

E ola ia Kane-i-ka-wai-ola."

Amama. Ua noa.

Make the pillow.

The rain is falling from the sky.

Get ready to cut (the sickness).

Impose the tapu of Lono.

Oh, Lono,

Here is your offspring. He is sick.

Oh, Lono,

Take away all pains of sickness,

And his troubles.

Gods of the east, of the west, of the pearly shell of Kane (of the sea).

To grant life belongs to Kane of the water of life.

After the prayer a string was taken, a loop was made by turning the right hand part of the string under the left, then a part of the right hand string was put down through this loop, and, by pulling slightly taut, a new loop made; then more of the right hand string was put down through this new loop and so on until five or seven loops were made, as the priest preferred. Next the priest placed his indexes through the loops at the end of the chain and grasped in his hands the ends of the string, and placed the chain on the body of the patient extending from the navel toward the head. Then he slipped out his indexes from the loops and with his hands

pulled the ends of the chain, when all the loops came undone and the string was straight. Then another chain was made in like manner and placed from side to side across the chest and again pulled apart. This was done five times in each position. The loosing of the chain probably was a symbol of the loosing of the patient from his sickness.

Then another prayer was said to get the answer of the gods of sickness:

O Kama-mauli-ola, e ola.  
 Oia nei o . . . (name of patient), e ola.  
 O Kane, O Lono, O Kama-uli-ola  
 Eia oia nei o (name of patient).  
 E lawe i ka eha.  
 E lawe i ka hu'i.  
 E lawe i ka loku,  
 I ke kaumaha o ke kino.  
 Hoomama iaia.  
 O na eha a pau e lawe.  
 O ka pane ia oe e Kama-uli-ola  
 "E ola."  
 Amama. Ua noa.

O Kama-mauli-ola, give life.  
 Let this one (name of patient) live.  
 Oh Kane, Oh, Lono, Oh, Kama-uli-ola,  
 Here is (name of patient).  
 Remove the pain.  
 Remove the ache.  
 Remove the anguish,  
 The weariness of body.  
 Revive him.  
 Remove all pains.  
 Oh, Kama-uli-ola, reply:  
 "Live."  
 Amen. The prayer is ended.

Then the priest took the string in his hands, made two loops and tied them together with a single, overhand knot, then held the ends of the string in his hands. Whenever he pulled his hands apart the knot would become untied. The ends of the string must be held firmly in the hands, for if any hitch should occur in pulling the knot apart the priest's treatment would fail. This knot was made several times, held in different positions on the body, and pulled apart after each position and remade. A knot was held across the forehead, then across the throat, the chest, the navel, the pelvis, the middle of the right thigh, the right knee, the middle of the right shin, the top of the ankle joint, the middle of the left thigh, and down the left leg as on the right. The idea was probably the undoing of the disease in each part.



## HAWAIIAN FIGURES MADE BY TWO PLAYERS

## CAT'S CRADLE

Made on all the islands of Hawaii. The familiar cat's cradle is made in Hawaii. The opening may be with string back of hands as is usual with Europeans (as on p. 137) or with strings back of wrists as is the usual way with Chinese and Japanese, or with the string back of thumbs and little fingers (as on p. 116). As the making of ordinary cat's cradle is so well known, the methods of making its figures, so far as they have been described by Jayne (18, pp. 325-335) are not repeated. However she does not describe the last two figures.

1. Make first "fish in a dish" (p. 116). Second player turns hands so that palms face upward and with each little finger hooks up one of the pair of strings that pass lengthwise through central lozenge, then with thumb and index of each hand takes hold of the nearest side cross of the figure, turns thumbs and indexes up into central opening of the figure and extends. This makes "hourglass." (See fig. 98, *a*.)

2. The player holding the figure releases little fingers. This makes "looking glass." (See fig. 98, *b*.)

This is called *anamanu* (bird house) in Culin's plates (18, p. 375, no. 18). Another of Culin's plates *mahiki* (seesaw) may possibly be the figure of the manger, or cradle inverted, made with strings crossed by an error.

Cat's cradle is also made in Hawaii from Opening A, making the manger as the first figure, as follows:

1. Opening A. First player holds hands with fingers pointing up.

2. Second player passes right little finger string under figure from ulnar side, hooks radial thumb string and pulls it below all strings beyond ulnar side of figure. Then second player passes his left little finger string under figure from radial side, hooks first player's ulnar little finger string and pulls it under intervening strings beyond radial side of figure.

3. Second player puts thumb and index of each hand down into triangle near its little finger, under intervening strings and up central opening, and extends, first player releasing his hands from the strings.

## PAUMA-WAI B

The figure *pauma-wai* (water pump) is made on Oahu.

1. Make regular cat's cradle until "fish in a dish" is formed (fig. 77).

2. Second player pulls one straight string of central opening up from above with one hand, and the other straight string of central lozenge down from below.

Jayne (18, p. 372, fig. 848) has a figure named *paumawai*, collected by Stewart Culin from a Hawaiian sailor that is "fish in a dish" with central lines crossed. This is probably a mistake caused by making the first loops on the hands wrongly in beginning cat's cradle.

#### PAHILOLO B

The figure *pahiolo* B (saw) is made on Oahu and Kauai.

##### 1. Opening A.

Second player passes his right hand under figure from ulnar side, with his little finger hooks the radial thumb string and pulls it under the figure to the right. He passes his left hand under the figure from radial side and with his left little finger hooks the ulnar little finger string and pulls it under the figure to the left. The first player drops all strings except those held by the indexes. Both saw by moving hands alternately in and out.

This figure is made in India (12, p. 78), by Europeans (19, p. 177 B) and by Malays (17, p. 86).

#### PAHILOLO C

The figure *pahiolo* C is made on Oahu and Kauai.

##### 1. Make the first figure of the ordinary cat's cradle.

Second player with one hand takes the straight string between first player's hands on one side of figure, and with the other, the opposite straight string, and pulls apart. First player withdraws his hands downwards from all strings except those held by the middle fingers (or indexes if he has made the figure with indexes). Both players move hands so as to saw.

This figure is made by the Maoris (1, vol. 4, no. 4, p. 152; 2, p. 119), in the Society Islands (17, p. 80) and from the figure "manger" in a similar way by the Chinese (12, p. 79).

#### PAHILOLO D

The figure *pahiolo* D is made on Oahu, Kauai, and Niihau.

1. First player holds string, one end of loop in each hand. Second player makes a loop in middle of each string; twists one or both of the small loops  $180^\circ$ , passes one loop through the other and pulls apart.

2. Players saw by moving hands alternately in and out.

This figure may be made by one person who uses mouth and toe.

It is made also in Ireland (18, p. 356).

#### PAHILOLO E

The figure *pahiolo* E is made on Oahu.

1. Make *papio-maka-nui*, method 1 or 2 (p. 21).

Second player with left hand picks up thumb string half way between first player's hands and with his right hand picks up index string half way between hands. First player releases index loops, and players, by alternating pulling hands apart and moving them toward each other, make a sawing motion.

KAUHALE A LIMALOA, HALE O PELE, KUAHIWI O HALEAKALA,  
OR HALE INIKINI

There is a mirage at Mana, Kauai, and on the last four nights of the lunar month, Limaloa, demigod, ancient chief of Mana, may be seen with a long pole, building ghostly houses.

1. Players A and B face each other and with strings of equal length each makes Opening A.

2. A passes his hands with all their strings upon them from the distal side into B's index loops and through the figure held by B, who releases his index loops which fall upon wrists of A, who then withdraws his hands with the extra strings.

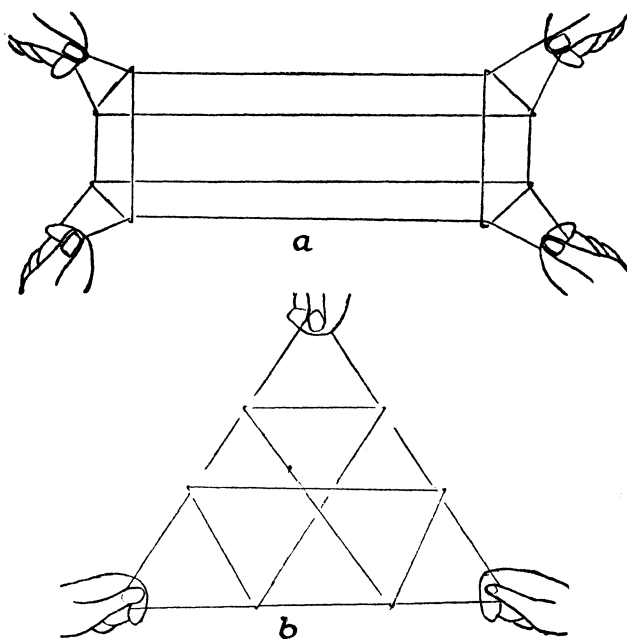


FIGURE 104.—String figures: *a*, *kauhale a Limaloa* (village of Limaloa), *hale o Pele* (volcano pit), *kuaahiwi o Haleakala* (top of Haleakala) or *hale Inikini* (Indian house), made by two persons with two strings, made on Hawaii, Maui, Oahu, and Kauai; *b*, "mountain," a continuation of *a*, made on Kauai.

3. B in turn passes his hands into index loops of A and returns with these loops which A in turn has dropped upon B's wrists.

4. A frees his hands of all strings and wraps them around the figure held by B.

5. A, with his right hand, picks up B's right little finger loop and with his left hand, B's right thumb loop.

B releases his right hand from its wrist loop, and with it picks up his left thumb loop and little finger loop; releases his left hand from its wrist string and with it takes from the right hand his former left little finger loop.

6. A and B pull the loops held by them until the final figure appears (fig. 104, a).

Kauhale a Limaloa.

Kukulu kauhale a Limaloa i ka li'u-la,

Hookuene ana i ke kaha o Ke-alialia.

Holo ka wai lana i ka aina a pau e;

A pau la.

Village of Limaloa.

Limaloa is building his village in the mirage,

Arranging the houses in lines on the barren, sun-baked land.

The mist spreads over the land and is gone.

All is gone.

This figure is made in Marquesas Islands as *hahaua* (ray fish) (15, p. 48); by the Maoris (1, vol. 3, p. 197; 2, p. 137) as *moutohora* (whale); in Yap and Palau, Caroline Islands, as "plan of a house" (18, p. 200; 25, p. 46, no. 10); in North Queensland, as canoe or fishnet (18, p. 385).

7. A holds hands wide apart and B releases one hand and holds the other high.

This makes the figure "mountain" (fig. 104, b).

This is a different continuation from that in the Carolines or that made by the Maoris.

The name *hale Inikini* is a strange one to find in Hawaii. The figure in no way resembles a wigwam or tepee. Perhaps this came to Hawaii by some Hawaiian sailor in the early days when voyagers referred to all Pacific islanders as "Indians" who called the figure an Indian house because white sailors did. This name for the figure is the only one found on all islands, *hale o Pele* is exclusively found on Hawaii; *kuahiwi o Haleakala* on Maui; and *kauhale a Limaloa* on Kauai.

#### PALAOA

The figure *palaoa* is made with six strings of varying length, by two players. A third player to hand strings to the others as they are needed is a convenience.

1. Two players take a string about 12 feet long (a 6 foot loop), put hands through it from proximal side and hold on wrists and draw apart.

Then both turn hands outward (to sides), down on outside of strings of loop, toward the body and up between the body and the loop of string.

2. Each player in turn, palms upward, grasps the part of the loop that runs from wrist to wrist of the other player, draws it to himself and through his wrist loops, letting his wrist loops fall off. Both let the new loops held by them pass over their hands becoming wrist loops.

3. The shortest string is now taken by both players simultaneously, held

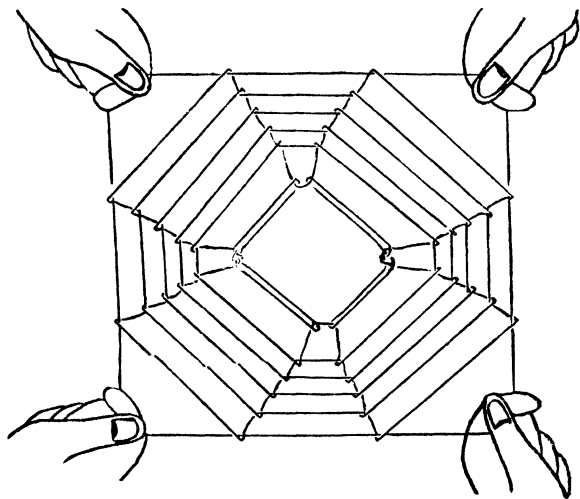


FIGURE 105.—String figure, *palaoa* (plow), made on Hawaii, made with six strings by two persons.

in all four hands and drawn through the wrist loops, letting wrist loops fall off. The string just taken becomes a sort of frame for the figure.

The same movement is made with the other four strings which are taken in the order of their size, the last not being slipped on the wrists (fig. 105).

As the figure grows the following taunting chant is repeated, two lines for each string used.

Palaoa, palaoa, mahi ai.  
Heaha ka ai e ai ai?  
Lihilihi pau i ke akua,  
He akua la, he akua.  
He akua na 'lii o Kona,  
He akua hoala hiamoe.  
Ho-ala, ho-ala, hiamoe.  
E ala oe, e moe loa nei.  
Eia ka la io uli.  
Uliuli kai, e uli.

Plow, plow, till the ground.  
What is the food you eat?  
Bits left by the ghosts,  
The ghosts, the ghosts.  
The chiefs of Kona are ghosts;  
Ghosts that wake the sleepyhead.  
Awake, awake, sleepyhead.  
Arise, you sleep too long.  
Here is the sun, in the sky.  
The deep blue sky, blue.

As in ancient times Hawaiians had no plows, this chant though at least forty or fifty years old has been composed since the coming of white men to Hawaii.

## HAWAIIAN SLIP TRICKS

## HAND SLIP TRICK A

Made on Oahu and Maui.

1. Opening A, by player A.
2. B puts his hand through center of figure from bottom. A releases indexes and little fingers and pulls taut. B's hand is caught.
3. A puts little fingers from proximal side into thumb loops, extends and makes Opening A again, B meanwhile holding twisted loop on his wrist.
4. B again puts his hand through center of figure, this time from top down. A again releases indexes and little fingers and pulls. B's hand is freed.

This trick is made by the Barrow and inland Eskimos (19, p. 178 B).

## HAND SLIP TRICK B

Made on Oahu and Kauai.

1. Hold left hand palm up and hang loop from palm.
2. With right hand take strings of hanging loop and bring them to front of the left hand, the radial string passing to the front between left index and middle finger, and the ulnar string between left ring and little finger; then, still holding strings in right hand, pass them between left index and left thumb, then around the thumb, keeping the string that came to the front of left hand between the index and middle finger distal; then pass the strings to the back of the left hand between the same fingers by the same route they came (that is, the string that came to the front between index and middle fingers goes back by that route); then bring them to the front again, the string that just passed between index and middle finger coming to the front on the radial side of index, the other coming to the front on the ulnar side of little finger. Right hand now drops the long loop it has been holding on this long journey and lets it fall in front of left hand.
3. With right hand take both thumb loops off left thumb, pull them out to full extent, then pass them to back of left hand between left middle and ring fingers and drop them there.
4. With right hand pull out free left palmar string. The right hand is freed.

This trick is made by Europeans "the German trick" (12, p. 84); Eskimos of Point Hope (19, p. 179, B); in Goodenough Island, Papua (20, p. 325) as "sago palm"; and in Marquesas Islands (15, p. 52), and in New Zealand (2, p. 147).

# HAND SLIP TRICK C

Made on Oahu.

1. Hang loop on little finger of left hand. With right hand pass string that comes to front of left hand as radial little finger string, around left little finger, then to front between little and ring fingers, across palmar aspect of left ring finger, and to back of hand between middle and ring fingers.

2. With right hand pass string of long loop that is radial little finger string to front of left hand between left middle and ring fingers, then to back of hand between left index and middle fingers.

3. Pass, in like manner, radial left ring finger string to front between left index and middle fingers and around index finger. A long loop now hangs from left index down back of left hand.

4. With right hand pass long loop strings around left thumb to its palmar aspect keeping distal the string that was radial middle finger string; then over left index, the distal thumb string passing on the radial side of left index, and the proximal thumb string between index and middle finger; then, still holding strings in right hand, pass the radial string of the long loop, to the front between index and middle fingers, around middle finger and to back of left hand between middle and ring fingers; then pass the new radial string of the long loop around ring finger and to back of hand between ring and little fingers, and lastly pass the new radial string of the long loop over little finger to the front and let it drop.

5. Release left thumb. Pull both little finger ulnar loops and left hand is freed.

This trick is made also by Europeans, and in New Zealand where it is called the "Maori mouse trick" (2, p. 149).

## KELE-OPA, PUA-KALA, OR PUHI PALEMO

The slip trick called *Kele-opa* (lame Kele), *pua-kala* (thorny flower), or *puhi palemo* (gliding eel) is made on all the Hawaiian islands.

1. Hold right hand with fingers pointing away, palm toward left. Hang string over right hand and thumb.

2. Pass left index proximal to palmar string, between right thumb and index and distal to dorsal string and with ball of index draw a small portion of dorsal string under palmar string. Turn left hand palm upward, put tips of indexes together and slip left index loop upon right index.

3. Pass left index proximal to palmar string between right index and middle finger and distal to dorsal string and with ball of index draw a small portion of dorsal string under palmar string. Turn left palm upward,

put tips of left index and right middle finger together and slip left index loop upon right middle finger.

4, 5. Continue this series of movements until there is a loop on each finger of right hand.

6. Release right thumb. With left hand take string of hanging loop that is a prolongation of right palmar string and pull. The right hand will be freed.

While pulling say:

Kele opa,  
Opa, opa,  
E ne'e ana,  
I kahakai  
Me kukaeuli  
Me ka alaala  
Poha!

Lame Kele,  
Limping, limping,  
Creeping  
To the beach  
With his squid bait,  
And the squid bait,  
Bursts!

The picture is of a disappointed fisherman, limping tired to the beach with nothing but his bait, which bursts and leaves him with nothing.

Or say:

Pua-kala  
Kalakala  
Wale kona ili  
Ke moe iho i ka po.

Prickly flower.  
Thorny  
Its skin  
As one lies down at night.

This slip trick is world-wide, a worthy rival of the ordinary cat's cradle. It is made in Murray Island, Torres Strait as "mouse" (12, p. 80); in Loyalty Islands as "uprooting *maniania*" (4, p. 233); by Eskimos (19, p. 178 B); by American Indians of many tribes (18, p. 340); by South American Indians of British Guiana as "snake" (22, p. 14); by Europeans as "cat chasing mouse" or "train going through tunnel"; in Central Africa (6, p. 129) and West Africa (24, p. 141) by Filipino Negritoes; by Moros and Japanese (18, p. 340).

### E LOLI E

The figure *e loli e* is made on all the Hawaiian islands.

1. Hold one end of loop in left hand. Pass right hand through hanging loop, then, pointing right hand down, carry it to right, then around the two strings of hanging loop, then turning right hand up bring it back again through hanging loop in the opposite direction to that by which it entered the loop. Pull right hand away, it will come free.

E loli e, e loli e,  
Nahu i ke kalo.

Turn, turn,  
Bite the taro.

Repeat the first line slowly as the hand is turning; the last staccato,



as the hand is pulled free. There is a pun on the word *loli* which means both "turn" and "sea slug," the shape of the sea slug suggesting taro.

Should the hand be held up instead of down, in turning around the loop, it will be caught instead of freed. Nine out of ten tyros in attempting to do this slip trick will hold the hand up instead of down and fail to have the hand come free. This was a great gambling or betting trick of the Hawaiians. Fornander records a chant which was to be sung before the betting (7, vol. 6, no. 1, p. 215).

This trick is made in Murray Island, Torres Strait as "lizard" (18, p. 337); in Goodenough Island as "mosquito" (20, p. 325); in Yap, Carolines, as "carrying money" (18, p. 337); in the Marquesas Islands as "eel" (15, p. 52).

### KNOT SLIP TRICK

Made on Oahu.

1. String in first position. Bending fingers of right and left hand toward each other, put thumbs toward body and down, and at same time put little fingers away from body and down; join tips of thumb and index of each hand on proximal side of transverse strings, slip loops off thumbs upon little fingers, separate hands and draw tight. Each little finger has a slip loop about it.

2. With right hand pass double string from left little finger across left palm past left thumb, around thumb and back of left thumb, index, middle, and ring fingers and between ring and little fingers to front of left hand.

3. Right thumb picks up double right little finger string.

4. Opening A with double palmar strings, but pick up right palmar strings first.

5. Slip strings off back of left thumb, index, middle and ring fingers to front of left hand, release right thumb and draw tight.

6. Release indexes. There is a knot in center with long loops hanging from it. Draw hands apart and knot disappears.

This figure has a strong superficial resemblance to "locust" of Central Africa (6, p. 130); "fly" of British Guiana Indians (22, p. 13); *sisiafwatu* of Goodenough Island, Papua (20, p. 314); "star" of Fiji (17, p. 17), and "fly" of New Caledonia (4, p. 232). Though made differently, the general idea is the same. It is made on the Gold Coast, Africa, with a single string tied to little fingers (10, p. 300).

This is a more striking and interesting trick, if the knot be called a "mosquito" and the hands slapped together as though in an attempt to catch it and then drawn sharply apart. I have seen no Hawaiians do this, but it is quite possible that formerly it was done, since the action accompanies similar figures in the Pacific.

## WRIST SLIP TRICK

Made on Kauai.

1. Hang loop from left wrist. With right hand take one turn about left wrist with radial string of hanging loop. Release string.
2. With right hand pass ulnar hanging string across (distal side) radial string. Then pick up crossed strings and pass over wrist and drop. Pull long loop. Left wrist is free.

This trick is made on the neck in Nyasaland, Central Africa, "the African hanging trick" (6, p. 124; 12, p. 86) and in Lifu, Loyalty Islands, as *feni watreng* (putting on the basket) (4, p. 234) and is made on the foot in British New Guinea (28, p. 232).

## THUMB SLIP TRICK A

Made on Oahu.

1. Opening A.
2. Pass thumbs from proximal side into index loops and release indexes and little fingers.
3. Put thumb tips together and let right thumb loops slide upon left thumb and become distal left thumb loops.
4. With right hand pull proximal left thumb string. Left thumb is freed.

## THUMB SLIP TRICK B

Made on Kauai.

1. String on left thumb and right thumb and index. Pass left index toward right between right thumb and index on distal side of and past the dorsal right thumb-index string and with ball of index pull it toward left, turning left index away and up.
2. Put middle, ring, and little fingers into index loop from below, then pass all fingers down into thumb loop and close on palms, releasing thumbs.
3. Put left thumb from distal side into loops held by the four fingers of left hand and release left hand fingers. Keeping eye on the radial left thumb string which runs to right little finger, hold it as distal left thumb string.
4. Without twisting put the loops held by the right hand over the left thumb and let them fall lower than the loops already on the thumb.
5. Put left thumb and index together. Then with right hand pull the distal left thumb string. The left thumb is freed.

### THUMB SLIP TRICK C

Made on Kauai.

1. Hang loop over thumb of second player so that one half is an ulnar hanging loop and the other half a radial hanging loop. (This trick can be done on first player's own thumb but it takes more dexterity.)
2. Take hold of each hanging loop a little nearer the thumb than its middle, double each loop upon itself, and then tie the two loops (each now consisting of four strings) together with a simple single overhand knot (bow knot) drawing the knot tight against the thumb, then let it hang.
3. Take hold of either one of the ulnar thumb strings and pull. The thumb is freed.

### THUMB AND INDEX SLIP TRICK

Made on Oahu.

1. String on left thumb and index, hanging down back of left hand.
- With right hand take hold of end of long loop and bring it between left thumb and index and draw it out to its full extent; then put tip of long loop back between left thumb and index (do not let go with right hand during this trick); close left thumb and left index and bring the tip of the loop held by right hand back to the front of left hand over the closed thumb and index, one string passing to left of thumb and one between left index and left middle finger. Draw out without separating left thumb and index. They are freed.

### INDEX SLIP TRICK

Made on Oahu.

1. Holding the ends of loop in each hand, lay it on floor stretching right and left.
2. With fingers of right hand pointing up through the loop as it holds right end of loop, pass right hand outward, to left, then inward across the main line of the loop (simultaneously turning right hand back up) and lay the end of loop down releasing right hand. In performing this movement, a twist will be formed in the loop, the near string crossing the far string of the loop. The right portion of the long loop is now curled upon itself.
3. Where the loop crosses itself a diamond is formed. Pass right index into middle of this diamond and hold on the floor and pull toward left with left hand. Right index finger will be freed.

### MIDDLE FINGER SLIP TRICK

Made on Kauai.

1. String on left middle finger, hanging down back of left hand. With

right take long loop and pass it around left thumb; across palm of left hand; on to the back again; and then over left middle finger to the front of left hand. In doing this, as the two strings pass back of left index keep the ulnar middle finger string proximal and the radial middle finger string distal; then before rounding the left thumb pass the distal string outside of (dorsal to) the distal string, so that as the two strings cross the left palm the distal string is one that originally came from between ring and middle finger.

2. Tuck long loop from the distal side, behind palmar strings.
3. Lift palmar strings over thumb and fingers to back of left hand.
4. Pull long string. The middle finger is freed.

#### CHANGING LOOP FROM INDEX TO MIDDLE FINGER

Made on Kauai.

1. String over left index, hanging down back of left hand. With right hand take long loop and bring it back of left middle finger, without twisting, keeping the ulnar left index string distal and the radial left index string proximal; then bring the long loop between left middle and ring fingers to the front of the hand; then across the front of left middle and index fingers; around them to the back of left hand again; across them behind and then, between left middle and ring fingers to the front of left hand again. Without twisting, throughout this movement the string that originally was the ulnar left index string should have been kept distal.

2. With right hand continue the distal string of the long loop around left middle and ring finger to the back of left hand and out to the front again between left middle and ring fingers.

3. Wind both strings of long loop in the other direction around middle and index fingers. There will finally result but a single loop on left middle finger.

#### CHANGING LOOP FROM TOE TO TOE

Made on Kauai.

1. One end of loop on right big toe, the other held in right hand. Place left hand across center of strings and place loop held by right hand without twisting over right big toe and adjoining toe.

2. With right hand pull right hand string, the one that comes from between the second and third toes, at same time releasing left hand. The string is no longer around the big toe but is around the adjoining one.

3. Repeat movements 1 and 2 with succeeding toes until the loop is on little toe.

4. To bring the loop back to big toe, reverse process, in movement 2 pulling left string.

### TOE SLIP TRICK A

Made on Kauai.

1. String stretched on big toes, feet apart.
2. With left hand pull far toe string over other toe string toward body.
3. With right hand take hold of lower toe string to the right of the strings held by left hand, and pass it to left over strings held by left hand to back of left big toe, around big toe.
4. Release left hand, spread feet wide apart. The left big toe is freed.

### TOE SLIP TRICK B

Made on Oahu.

1. String over toe (or second player's finger). Hold end of long loop with left hand.
2. Pass right middle finger over strings to the left; down below left string, then up between strings, picking up left string and pulling over and to right of right hand string.
3. Pass right index down to right of right hand string near toe; then from proximal side into toe loop: over the left string of this loop and down.
4. Place tip of right middle finger on toe, slipping middle finger loop down toward tip of middle finger or even on toe.
5. Release right index and pull with left hand. The toe is freed.

This is made by Navajo Indians (12, p. 87); by Chippewa Indians, and by natives in both the western Carolines (18, p. 346) and British New Guinea (28, p. 232).

### TOE SLIP TRICK C

Made on Kauai.

1. String over toe (or finger of second player). Hold long loop in left hand. With right hand take right hand string of loop and with it take turn around toe.
2. Pass right hand into long loop from proximal side and pull out the small loop around toe, and pull it through loop held by left hand.
3. Pass left hand string of the loop held with the right hand up through the loop held with the left hand, and hold it with the left hand, releasing the loop held by the left hand so that it is looped around the loop formerly by the right hand and now held by both hands.
4. Pull hands apart, tightening knot around toe.
5. Pass right hand loop below the left hand loop and without twisting lay both loops over toe.

6. Take hold of the crossed strings in front of toe and pull. The toe is freed.

The slip tricks, "threading a closed loop" (12, p. 89; 18, p. 354), a "fly on the nose" (12, p. 83, 18, p. 348), freeing string from buttonhole or neck (12, p. 85), and "Pawnee trick" (12, p. 88), though found in Hawaii, are not described as they are well known on the mainland of the United States and there is no reason to think them Hawaiian. Also their description has already been published.

"Leashing of Lochiel's dogs" (12, p. 73; 18, p. 116) is also made in Hawaii and is called "chicken's legs" or "crow's feet."

# NEW HEBRIDES STRING FIGURES

## KOMBE

1. Opening A.
2. With thumbs pick up radial index string and release indexes; then with thumbs pick up radial little finger string and release little fingers.
3. Pass little fingers from proximal side into thumb loops and hook

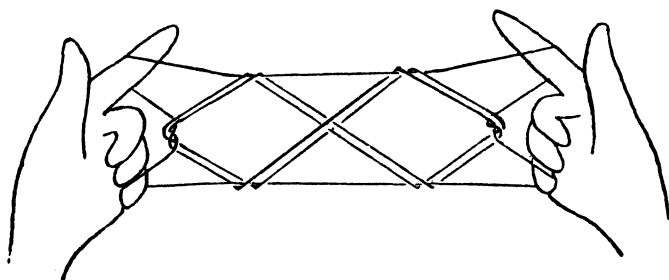


FIGURE 106.—String figure, *kombe* (fish net), made on Kauai by a native of Malo Island, New Hebrides.

down the distal ulnar thumb string, the one that goes straight from thumb and pull it through the other thumb loops.

4. Pass indexes from distal side into thumb loops, then distal to the proximal radial thumb loop, the one that goes straight from thumb to thumb, around it, and back, thus picking it up. Release thumbs. (See fig. 106.)

This figure is made by Eskimos of North Alaska as “burbot” (19, p. 49 B); and by Navajo Indians as “two stars” (18, p. 129). (See Table 1, p. 4.)

## RAT EATING CANE

1. String in first position. With right index pick up left palmar string.
2. With left thumb pick up radial little finger string. Release left little finger.
3. Pass left little finger from proximal side into left thumb loop and with ball of finger hook down distal ulnar thumb string.
4. Pass left index from distal side into left thumb loop distal over the proximal radial thumb string and pick it up with ball of index. Straighten index outward, thus transferring this string to back of left index. Release left thumb.
5. Pass left thumb from proximal side into left index loop and release

left index. Pass left index from distal side into left little finger loop. Release left little finger.

6. Twist right index around twice. Then wiggle right index to represent tail of rat when eating the cane. (See fig. 107.)

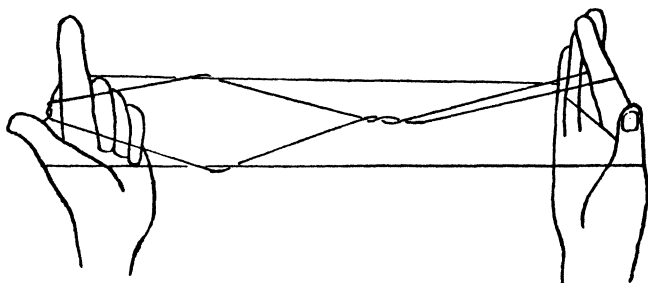


FIGURE 107.—String figure, "rat eating cane," made on Kauai by a native of Erromango, New Hebrides.

7. Release right index and extend. This represents the rat running away when startled.

#### CANOE

1. Double string and put in first position. Pass right thumb over left palmar strings; down; toward body under left palmar strings and radial thumb strings; up, and back to position.

2. Thumbs pick up radial little finger strings. Release little fingers.

3. Pass little fingers from proximal side into thumb loops and hook down to palms the ulnar double thumb string that is a straight double string from thumb to thumb.

4. Pass index fingers between the two lower radial thumb strings that do not run straight from thumb to thumb. Do this in the same way with

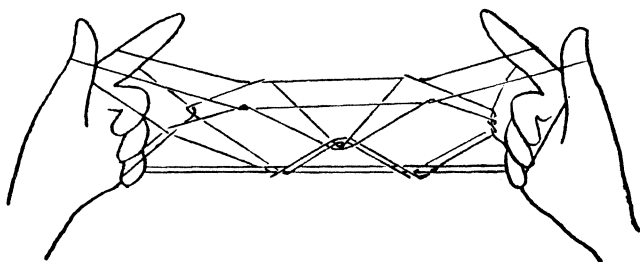


FIGURE 108.—String figure, "canoe," made on Kauai by a native of Erromanga, New Hebrides.



each index, so that each will have the same thumb string below it, and the same above it. Then hook down with indexes one of the two thumb strings that are straight strings from thumb to thumb and carry it back between the other thumb strings, returning indexes to position. Release thumbs from the thumb strings that run from thumbs to indexes and to radial index string.

5. Make sure that the transverse radial thumb string is the distal one; then navaho thumbs and extend, holding thumbs and indexes high to form the sides of the canoe and little fingers low to form the keel. (See fig. 108.)

#### YAM, AND DANCING SUNBEAMS

1. Hold string hanging in a long loop with fingers of both hands pointing toward body through loop. Make a small loop in upper part of string. Pass indexes toward body through this small loop, then up, and extend, drawing hands apart and releasing all but indexes. There are now two radial index strings that run straight from index to index, and two ulnar index strings that cross each other.

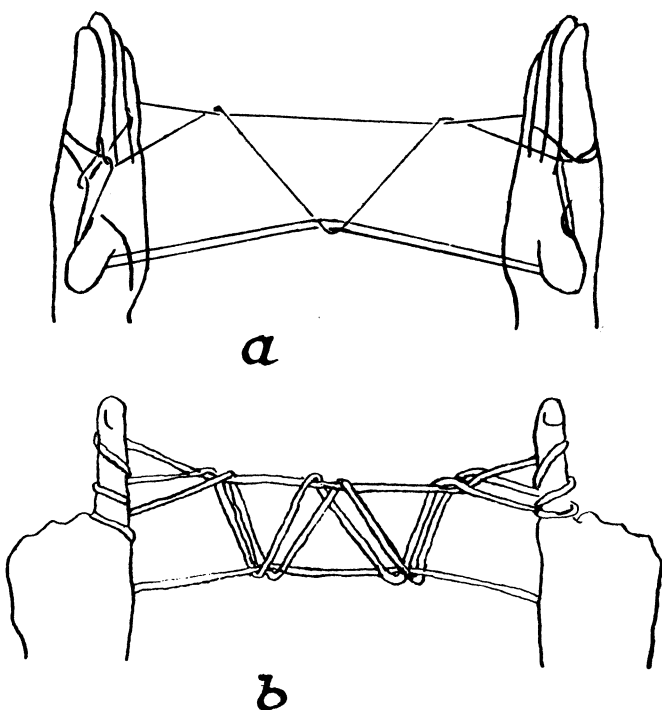


FIGURE 109.—String figures: *a*, "yam," made on Kauai by a native of Erromanga, New Hebrides; *b*, "dancing sunbeams," a continuation of *a*.

2. Pass thumbs over proximal radial index string and pick up proximal ulnar index string.

3. Pass thumbs over distal radial index string and pick up distal ulnar index string.

4. Pass little fingers over distal radial index string and under and pick up proximal radial index string.

This makes "yam" (fig. 109, *a*).

This figure, made by a different method, is called in western Carolines *bachel* (money) (25, p. 43, no. 4).

5. Pass each index finger over the string that runs from it to back of little finger string, down into figure and then up, picking up on back of index the string that runs from it to ulnar little finger string. Release thumbs.

This makes "dancing sunbeams." (See fig. 109, *b*.)

This is the same figure as "little fishes," Murray Island, Torres Strait (12, p. 12; 18, p. 233); and "mountain," British Guiana (22, p. 8) except that the final movement twists the top loop around indexes in the opposite direction. In British Guiana the first movement is accomplished differently.

In Palau, western Carolines, the figure is made by a different method as *eilent* (25, p. 42, no. 2), and in Orokol, New Guinea as *barihe* (a fish), (16, pp. 281, 286). It is a stage in the Loyalty Island figure "porker" (4, p. 229).

#### BOW AND ARROW

1. Hold string hanging in a long loop with fingers of both hands pointing toward body through loop. Make a small loop in upper part of string. Pass indexes toward body through this loop, then up, and extend by drawing hands apart, releasing all but indexes. There are now two radial index strings that run straight from index to index, and two ulnar index strings that cross each other.

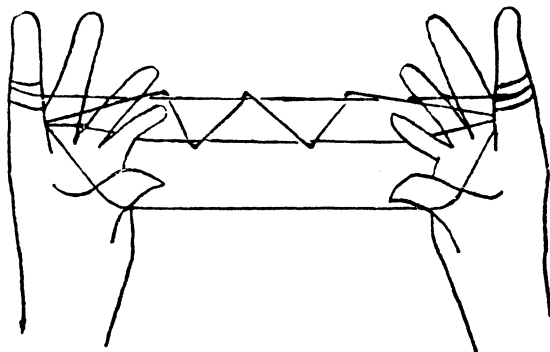


FIGURE 110.—String figure, "bow and arrow," made on Kauai by a native of Erromanga, New Hebrides.

2. Pass left thumb distal to proximal radial index string, pick up the two ulnar index strings and bring them back between radial index strings.
  3. Pass right thumb distal to proximal index string and pick up proximal index string; then distal to both radial index strings and pick up ulnar index string.
  4. Pass little fingers over distal radial index string and pick up on backs of little fingers the proximal radial index string.
  5. Pass indexes down over palmar string on the radial side of radial index string and pick up on back of indexes the radial index string.
  6. Release thumbs from the thumb string that is not a straight string from thumb to thumb and extend.
- (See fig. 110.)

#### KILIKIA LEAVES

1. Opening A.
2. Pass thumbs under index strings, from proximal side into little finger loops; over ulnar little finger strings; down; toward body under all strings, and up. Release little fingers.
3. Pass little fingers from proximal side into index loops and hook down radial index string on palms.
4. Pass indexes from distal side into thumb loops, then in an ulnar

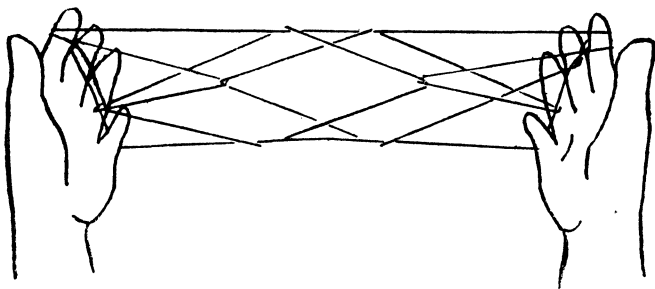


FIGURE 111.—String figure, *kilikia* leaves, made on Kauai by a native of Erromanga, New Hebrides.

direction through index loops and up. Release little fingers and extend. This results in a figure identical with *po* (fig. 37) but upside down. This stage is a figure in Victoria, Australia, called “crayfish” (13, p. 134); in Fiji it is *lalakai* (wicker food basket) (17, p. 47); and in New Caledonia it is a stage in making the figure “sugar-cane” (4, p. 223).

5. Pass little fingers from proximal side into central diamond; then pass each little finger distal to the two strings between it and the thumb of the same hand; then proximal to the radial thumb string that is a straight

string from thumb to thumb; then up, around this radial thumb string and back into central diamond from the distal side. Release thumbs and extend.

6. There is a large central diamond with double sides. The strings forming one of the loops around each index cross each other near the index so as to form a figure eight near each index. Pass thumbs from proximal side of figure into the loop of the eight further from the index and push thumbs toward each other, thus pushing toward each other two corners of the inner diamond and changing the double diamond into a large outer and small inner diamond.

This figure represents the leaves of the *kilikia* tree of New Hebrides. (See fig. 111.)

This figure is made in Fiji as *mata-ni-singa* (the sun) (17, p. 48), and in Society Islands as a stage in *tuare* (bravado) (15, p. 83).

#### MAN IN BED

1. Opening A.
2. Pass indexes from distal side into little finger loops, toward body around radial little finger string and index strings and up to position between radial index string and ulnar thumb string. Release little fingers.
3. Twist index fingers once; away, down, inward, and up.
4. Pass little fingers from distal side into index loops and hold ulnar index strings down on palms.

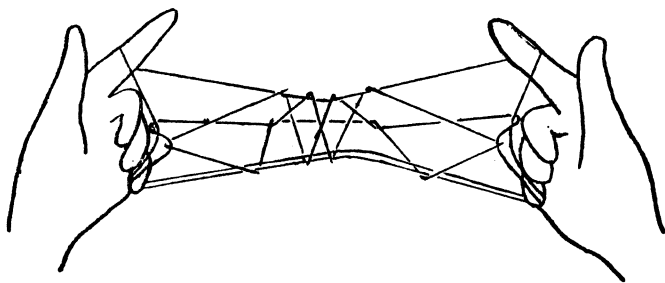


FIGURE 112.—String figure, "man in bed," made on Kauai by a native of Erromanga, New Hebrides.

5. Pass middle fingers from proximal side into thumb loops. Release thumbs.

6. Pass thumbs from distal side into middle finger loops and pick up on backs of thumbs the radial index string that is not a straight string from index to index. Release middle fingers.

7. Pass middle fingers from proximal side into thumb loops. Release thumbs.

8. Pass thumbs from distal side into middle finger loops and pick up on backs of thumbs the palmar strings, releasing middle fingers and little fingers.

9. Pass little fingers from proximal side into thumb loops. Release thumbs.

10. With backs of thumbs pick up the radial index string that is a straight string from index to index. Release indexes.

11. Pass indexes from distal side into thumb loops. Release thumbs and extend. (See fig. 112.)

### TWO BIRDS FLYING

1. One end of loop on toe. With the other end make Opening A on hands.

2. Pass little fingers over radial little finger string and then under and pick up ulnar index string. Then little fingers pass down into toe loop, separate and come up, the right little finger to the right of the right toe string and the left little finger to the left of the left toe string.

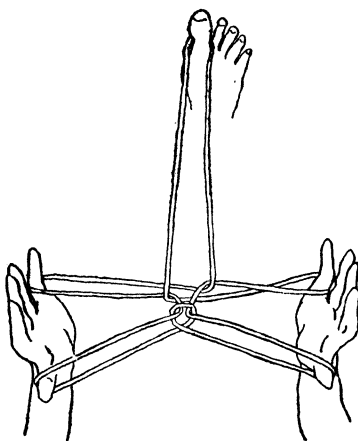


FIGURE 113.—String figure, "two birds flying," made on Kauai by a native of Erromanga, New Hebrides.

3. Pass thumbs under and pick up the radial index string. Release thumbs.

4. Release index fingers and extend. Imitate a flying motion with thumbs and indexes. (See fig. 113.)

This is the same figure as: "the tern" of Murray Island, Torres Strait (12, p. 10); "palm tree," Queensland (18, p. 381); "owl," Fiji (17, p. 15), and "shredding coconut," Caroline Islands (25, p. 51).

## BABY'S MAT CRADLE

This figure requires two players and two strings.

1. Opening A by player A.
2. A with thumbs picks up radial index string and navahos thumbs, then with little fingers picks up ulnar index string and navahos little fingers. Release indexes.
3. B passes his hands between the palms of A and the strings in center of figure, then rubs his palms together over these strings and withdraws them, leaving the figure held by A looking like a capital H lying on its side.
4. B lays the second string from hand to hand of A and between A's index and middle fingers so that a loop falls down the back of each hand

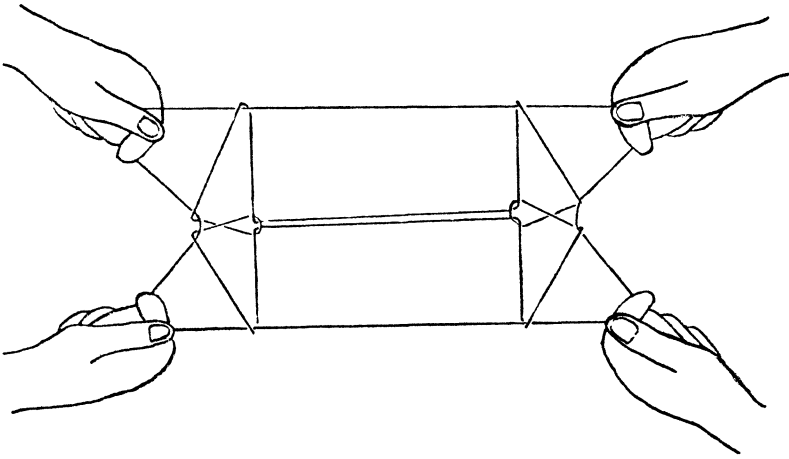


FIGURE 114.—String figure, "baby's mat cradle," made with two strings, made on Kauai by women, natives of Omha Island, New Hebrides.

of A and a double string stretches across above the figure made by the first string.

5. B draws part of the radial string of the second string from distal side through left thumb loop of A and part through right thumb loop of A; then with ulnar part of second string treats similarly the little finger loops of A. Then on proximal side of the figure held by A, B takes and pulls taut the strings just drawn through, making of them, four long loops.

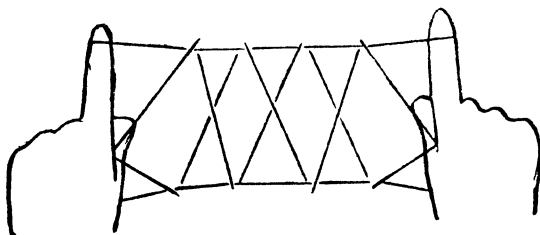
A takes his hands out of the strings held by him, pulls them taut, then drops them and takes two of the loops held by B; and A and B extend the figure. (See fig. 114.)

GILBERT ISLAND STRING FIGURE

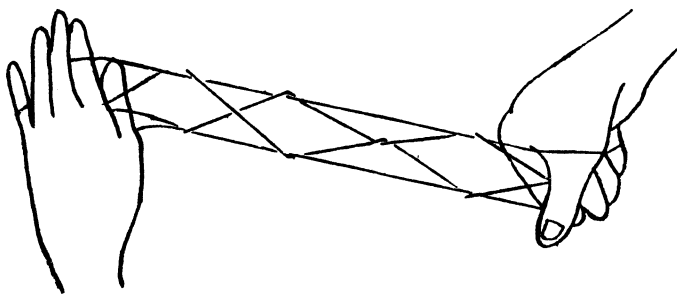
FOUR EYES

1. Hang string from mouth. Make one turn in hanging loop by passing left hand string of loop to right between body and right hand string of hanging loop.

2. Pass both hands outward through lower part of hanging loop, then to right and left, past right and left strings of hanging loop; toward body and up.



a



b

FIGURE 115.—String figures: *a*, "four eyes," made in Honolulu by a native of Gilbert Islands; *b*, "three eyes," made in Honolulu by a native of Gilbert Islands, a continuation of *a*.

3. Pass little fingers toward body through the loop held by mouth (close to mouth, above the crossed strings). Release mouth and extend.

4. Release four fingers of each hand from wrist loop, leaving it as a thumb loop. (In other words, pick up wrist loops and put without twisting, over thumbs.)

5. Pass thumbs from proximal side into little finger loops. Extend.

6. Pass indexes from distal side into thumb loops, pick up ulnar thumb

string and, holding it tightly between index and middle finger so that it will not slip, turn hands, back toward body, fingers high.

This makes "four eyes." (See fig. 115, *a*.)

This figure is also made in the Ellice Islands as *teuila* (lightning), in the Tokelau Islands as *kalisi* (17, p. 78), and in the Caroline Islands (18, p. 260); in New Caledonia as "the bracelets" (4, p. 211). The opening movements vary slightly, but are essentially the same.

7. Proceed to make "three eyes" from above figure as follows:

A second player passes thumb and little finger of his right hand from the distal side of the figure between the left index string and distal radial left thumb string of first player and with his right thumb picks up the distal left thumb string of first player and with his right little finger picks up first player's left index string.

At same time second player does the same thing with his left thumb and little finger, passes them from distal side of the figure between the right index string and distal right thumb string of first player and with his left thumb picks up the distal right thumb string of first player and with his left little finger picks up first player's right index string.

First player releases his hands and second player extends on thumbs and little fingers.

8. Second player with thumbs picks up radial little finger string.

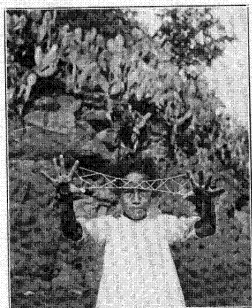
9. Second player passes indexes from distal side into thumb loops, and with them picks up ulnar thumb string and extends. Thumbs press close to palms and indexes to hold string taut. Left hand is above, palm down, index pointing to right, right hand below, palm up, index pointing to left. This makes "three eyes." (See fig. 115, *b*.)



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*A*



*B*



*C*



*D*

*A*, "SIX EYES," MADE BY DEBORAH KAIWI, OF WAIMEA, KAUAI; *B*, HALE AKAHI, MADE BY KULEANA ONO, OF KEKAHA, KAUAI; *C*, LONO MUKU, MADE BY HOEA WAHINEALOHA, OF HANAMAULU, KAUAI; *D*, WAILUA NUI, MADE BY KINI AINAIKE, OF KOLOA, KAUAI.



*A*



*B*



*C*

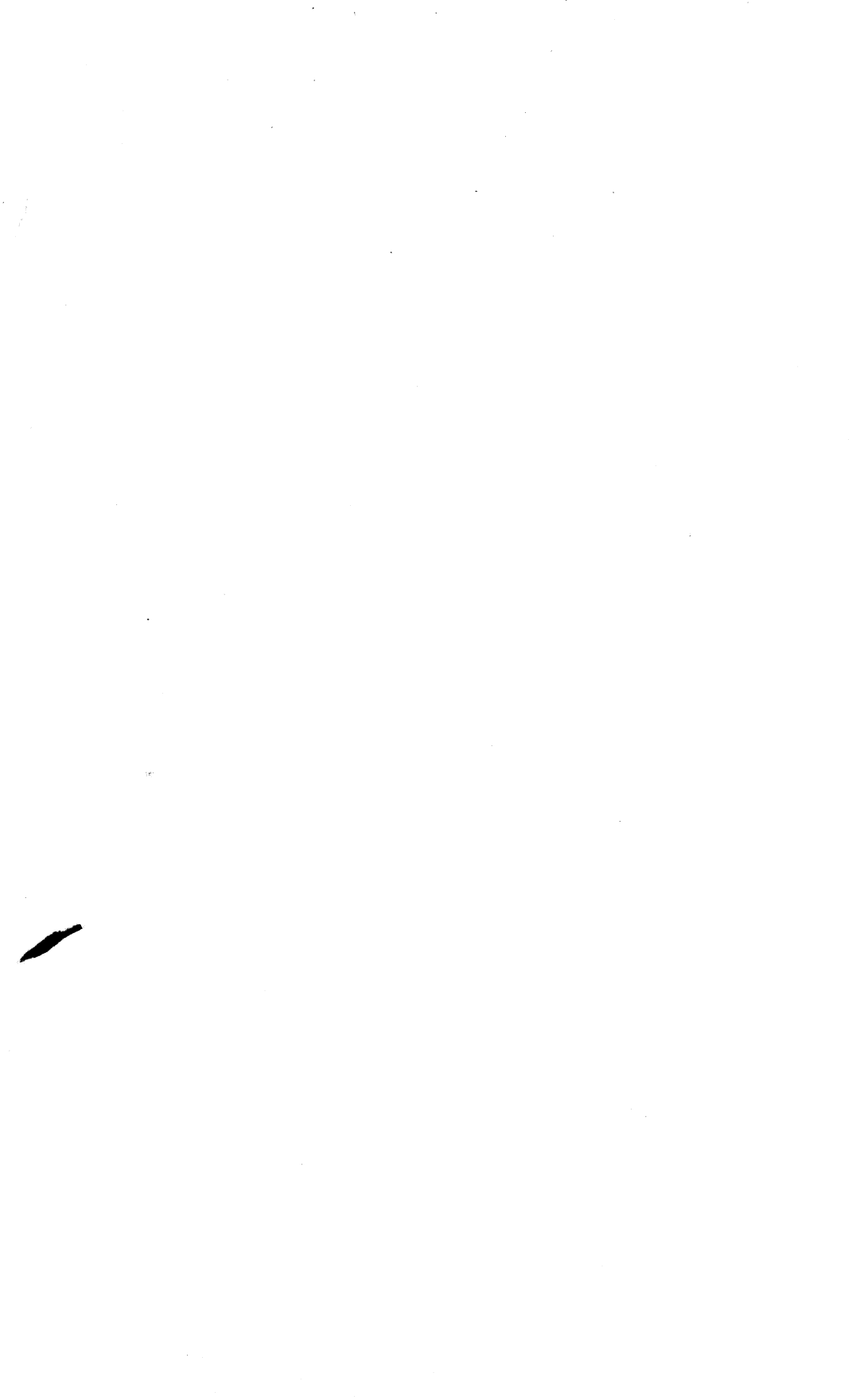


*D*

*A*, HALE O KULANIHAKA, MADE BY MRS. R. K. MOONHOAWA, OF NIIHAU;  
*B*, KUKUI LAU ANIA, MADE BY JOSEPHINE KAMALII, OF WAIMEA, KAUAI;  
*C*, NA KANAKA ALUALU KAI O LEAHI, MADE BY MIRIAM KANAHELE, OF  
 NIIHAU; *D*, "RAT EATING CANE," MADE BY HAWELIWELI, OF WAIMEA, KAUAI  
 (A NATIVE OF ERROMANGA, NEW HEBRIDES).







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